BUTANE-PROPANE News

A CHILTON PUBLICATION

MARCH 1961

The truth about electric heat

HEADQUARTERS FOR L.P. GAS INFORMATION SINCE 1931

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HELP BUILD *Your* BUSINESS

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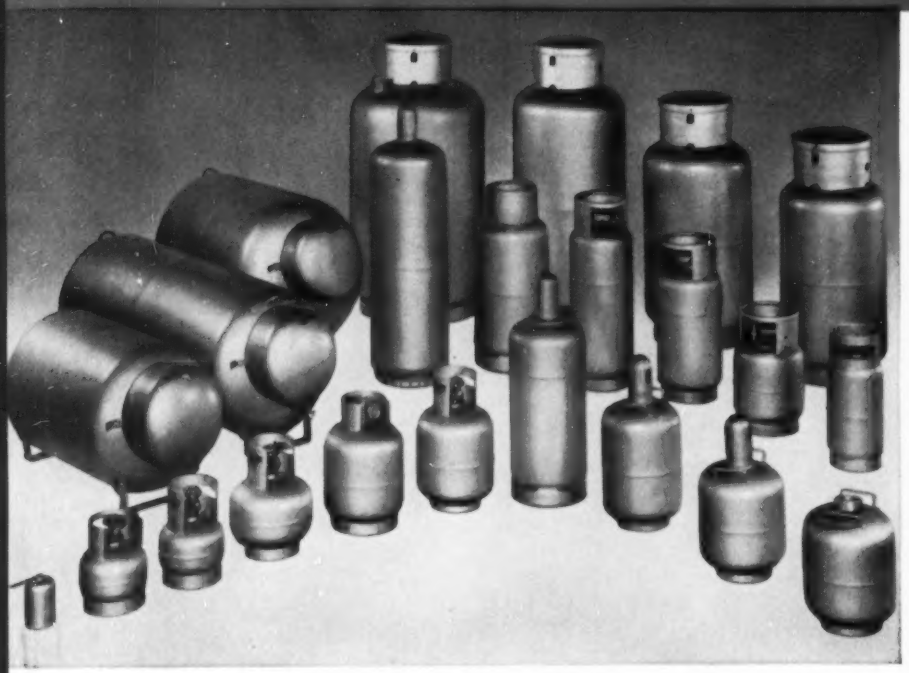

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Hackney 100-pound, Double-Bottom cylinders

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1 **CONTROLLED "NATURAL" DRYING**—exclusive Twin Air Streams combine sun-like heat and fresh clean "breeze," drying clothes soft and fluffy.

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4 **SERVICE-FREE DEPENDABILITY**—more than a million satisfied owners have made this America's "most wanted" dryer.

Hamilton Manufacturing Company, Two Rivers, Wisconsin

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A CHILTON PUBLICATION

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BPA NBP

Too much, too little

EVERYONE WHO'S IN THE COMMUNICATIONS BUSINESS (such as BPN) knows more than he tells, on paper. This is not to say that we suppress news; far from it. But there are some things you don't talk about. They may be scandalous, they may be only rumor. Mostly they are simply background facts that have no newsworthiness, but the knowing of which provides us a frame of reference for reporting other, useful facts.

Sometimes these unreported facts would hurt someone—*or*, someone thinks they would hurt him—if they were told.

Such is the case with an incident we stumbled on while researching the big electric heat article for this issue. It seems that in a certain city, which shall remain unnamed, a model all-electric home was built. Being an outstanding home, it was given considerable play in the electric forces' "total electric living" advertising.

Not long afterward, however, the gas heating people were out at the house, tearing out the electric heating system and substituting gas. The owner, it seemed, had become quickly and completely disillusioned with kilowatt comfort.

This kind of a story is a natural, so it wasn't long before an enterprising reporter heard of it and ran a brief mention in his newspaper column.

Well, the story should have gotten nationwide play, but it didn't because when the owner read the story in his local paper, he was fightin' mad. He didn't want his mistake publicized. All he wanted was to be left alone in his comfortable, newly gas-fueled home.

We would like to have included this episode in our big story this month. But the gas people who are serving the home asked us not to. They were afraid that if word got back to him that a national magazine carried the story, his feathers would be further ruffled. So we're keeping it under our hat. All we've told you is that something happened, somewhere. As it stands it's no story, because every incident must have a *who* and a *where* to qualify as a story. We're not about to disclose either one.

* * *

Then, sometimes, we don't tell as much as we should. So says W. H. Dolby, who took us to task for an item appearing in the January issue. The item, he says (in his letter which follows), should have been amplified. We agree. The trouble was, it was a last-minute item; space and time for amplification were not to be had.

So below, somewhat belatedly, is that amplification, in Mr. Dolby's own words. ■

BACK TALK

"T-1 type A" . . . how soon?

Los Angeles, Calif.

In "Highlights" in your January issue, I came across "stronger steel will be cheaper," describing a new T-1 type A steel, meaning less expensive high tensile steel fabrication.

This is a half-truth at the present time as this steel has not been approved for ASME Code construction. Information like this creates a hardship on tank fabricators as their customers immediately deluge them with requests for quotations using this new steel.

To our knowledge, there is not a case presented to the ASME Code Committee at this time for approval of this material. Even if a case were presented to this committee tomorrow, a year would probably pass before approval would be granted for use of this material.

W. H. DOLBY
SALES MANAGER
Superior Tank & Construction Co.


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CITY BLACKED OUT FOR 6 HOURS
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RECORD COLD
HITS EAST
FOLLOWING BLIZZARD
PIPES FREEZE UP
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- The new Reznor Venter, an automatic vent exhauster that lets you install Reznor unit heaters almost anywhere.
- Effective, five-way heaters for high ceiling applications, 300,000 to 600,000 Btu.

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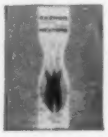

REZNOR HEATERS

"WORLD'S LARGEST SELLING DIRECT-FIRED HEATERS"

Behind the scenes

Thank you, Petrolane!

Los Angeles, Calif.

Again this year Childrens Hospital has received a generous contribution from Petrolane Gas Service, Inc., given in the names of friends and customers in lieu of individual Christmas remembrances. This gift, continuing the endowment of a bed here, will make care available for seriously ill youngsters who might otherwise not receive the specialized treatment required. We are deeply grateful to you and to Petrolane for joining in this observance of the true spirit of Christmas.

HENRY B. DUNLAP
Childrens Hospital Society

"Terrific" editorial

Evanston, Ill.

I just received your January issue, with the terrific "Beyond the Mains" editorial you wrote about our Phoenix Board Meeting.

You certainly have stated our case extremely well and we appreciate it.

GEORGE J. SCHULTE, JR.
National L. P. Gas Council

Bartlesville, Okla.

I have just read your editorial comment in "Beyond the Mains" published in the January issue. I want to congratulate you for it because it is very timely and factual. The most interesting facet to me was your conclusion that only by joining the National L. P. Gas Council can a member get complete service from the council. That of course is the essence of all such organizations, but it seems rather difficult to put that point across to many individuals.

W. F. DEVOE
Phillips Petroleum Co.

Minneapolis, Minn.

I want to acknowledge and thank you for the comments in "Beyond the Mains," pertaining to the National L. P. Gas Council and the Phoenix meeting.

I trust that many dealers, manufacturers and marketers will be moved into action by this editorial.

F. T. CARPENTER
United Petroleum Gas Co.

Mr. Bishop Sandifer, President
SANDIFER BUTANE GAS COMPANY, INC.
Jackson, Mississippi, reports . . .

"Over a decade of outstanding service from Mississippi Tank units"

This 9,000 water gallon transport, fabricated of T-1 Steel under Mississippi's new 64,650-lb. gross weight law, is one of four similar models recently added to the Sandifer Butane Gas fleet, bringing the total of Mississippi Tank transports owned by this progressive operator to eight. Mr. Bishop Sandifer, President, says that these new transports haul about 900 water gallons more per trip than his old-type units.

Of equal importance is the fact that Mr. Sandifer knows he can rely on these huge transports to give trouble-free service with minimum down-time. Based on 13 years' experience with Mississippi Tank equipment, Mr. Sandifer gives it an "excellent" rating from the standpoint of dependability.

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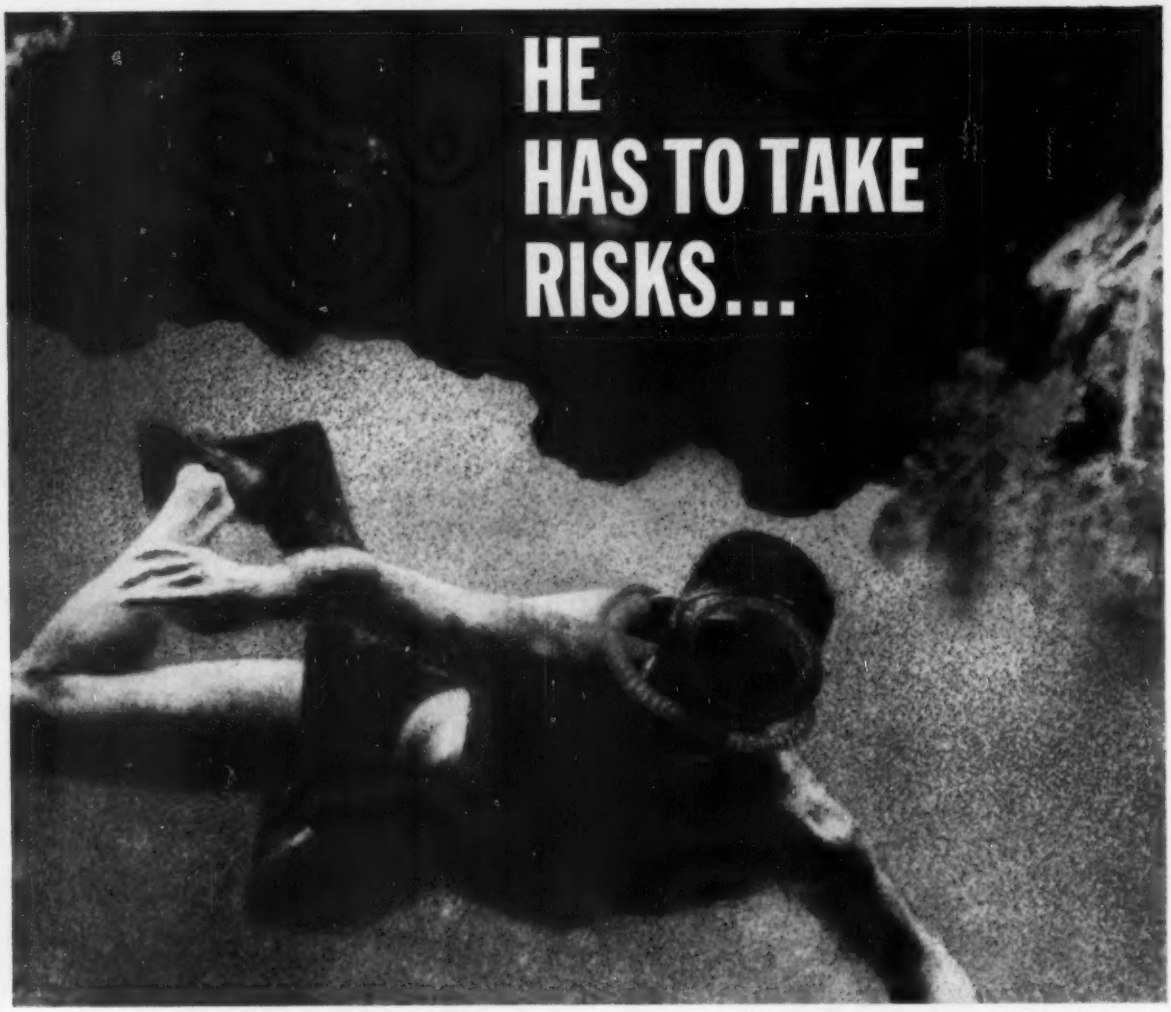

you can't afford to...

A diver takes chances when he must, but never on his equipment . . . nor should you. Yet to risk the necessity for shutting down and evacuating a 30,000 gallon LP-Gas tank in order to replace a defective safety valve has been calculated to involve 32 man-hours of labor, 2 days downtime, $100.00 replacement valve cost and a total cost of at least $180.00. We can eliminate this risk for you.

Take this RegO 4-Port Safety Relief Valve Manifold Assembly, for example. It's designed specifically to protect 18,000 or 30,000 gallon LP-Gas storage containers. Any one of its four safety relief valves can be removed for test or replaced while the container is under pressure. Any three of the safety relief valves provide ample discharge capacity for the usual 30,000 gallon propane container. Internal working parts are all of rugged construction, with a stainless steel liner in the safety relief valves to insure positive operation.

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BPN NEWS PARADE

The industry in action

ASSOCIATIONS

LPGA moves toward Council tie-in

The broad objectives of a reorganization plan, under which the LPGA and the National L. P. Gas Council would be consolidated, was approved at the association's latest board of directors meeting, held in San Francisco Feb. 2.

The principal feature of the plan, as now conceived, is a broadened promotional activity labeled "SUPAR," embracing Sales promotion, Unity, Publicity, Advertising, and Research.

The purpose of the reorganization, as stated in the preamble to the proposal, is to increase the effectiveness of future activities through "full industry unity."

The plan was submitted by the Planning and Organization committee, headed by W. R. Sidenfaden, president of Suburban Gas Service, Pomona, Calif.

Final approval of the consolidation still awaits the action of the Council and other interested parties, and the completion of organizational details by the committee and LPGA board.

Other highlights of the busy board session:

• H. N. Forman (National Propane, New York), chairman of the Gas Unity Committee, reported on progress in the creation of an All-Gas Exhibit at the New York World's Fair in 1964-5. Forman heads up a joint committee, established by the LPGA and the National L. P. Gas Council, which also includes M. J. Anton, Suburban Propane, Whippany, N. J.; B. F. Albanese, Esso Standard Division, New York; and K. R. D. Wolfe, Fisher Governor, Marshalltown, Iowa.

Forman is also a board member of GAS, Inc., a new gas corporation set up to direct the planning of the gas exhibit. GAS became the first exhibitor by signing a contract Jan. 13. A $5.5 million building will be built to house the gas displays near the main entrance to the fair.

• Charles M. Francisco (Fuelane, Liberty, N. Y.) told of the Market Research Committee's project to set up standard nomenclature for the industry. In explaining the significance of the job, he said: "As our industry becomes more and more exposed to, studied by, and dependent on the general businessman and outside financial interests, a clear, logical, and workable understanding of the various segments of our industry and the functions they perform is a 'must.'"

• F. A. Shellhorn (Anchor, Tulsa.), chairman of the Transportation Committee, noted some rate-reduction activity on the part of railroads to "combat (the) ever-increasing threats of pipeline competition." However, he said, "recent reductions have been mainly related to movements in large-size tank cars."

North Carolina LPGA workshop

North Carolina L. P. gasmen are improving their business management through a traveling management workshop program.

The program was launched in November 1960 with a general meeting describing its scope at nine locations.

The second series of sessions held in January drew 160 men and women. It covered the cost of doing business and was conducted by Med Serif, Cities Service Co.

Because of the success of the program, the association plans to make the traveling workshop part of its continuing educational plan.

Weather victimizes Northeast show

The 7th annual Northeast L. P. Gas Convention and Trade Show held in Washington, D. C., Feb. 6-8, was another casualty of the severe weather conditions which plagued the East Coast during the mid-winter.

Those delegates who were able to attend the meeting were forced to give thought to the possibility of changing the date for this meeting. The 1958 convention, held in the same place at about the same time, also ran into a weather problem.

The LPGA's Rudy Mahnke called for opinions to see if a date change would be favored. It was immediately apparent that it was. Mahnke said the matter would be referred to the planning committee and it would try to find a solution.

Weather or no, the meeting went ahead as scheduled. The first full day's program (Feb. 6) was highlighted by national association president Rudy Munzer's talk on "The Future for L. P. gas." The "future" he spoke of was a projection into 1970, at which time, he predicted, industrial-carburetion business will account for some 25 per cent of all the L. P. gas sold.

He also foresaw great strides being made in increasing the home-heating loads throughout the Midwest and guessed that the petrochemical industry would be liquefied petroleum gas' biggest market.

BPN NEWS PARADE

The industry in action

Lee A. Brand, first vice president of the Empire Stove Co., had some sobering thoughts for the listeners as he spoke of the competition between gas and electricity for the home heating market.

Brand cited growth figures on electric heating in recent years, and noted that the decrease in gas installations in 1960 was within 200 of electric heating's growth figures. "So, where is the electric growth coming from? The gas industry, that's where!"

Brand feels that the apex of the kilowatter's promotion in this field will not come until 1965.

"We've got to recognize the *need* to take steps to stop this," he said. As a means of combatting this threat, he urged dealers to "protect the 12-month load and stop concentrating on short-term markets. We've got to sell the heating load because that opens the door to all other loads. The all-gas home leads to customer insurance."

He even went so far as to say that a dealer "should not take on an L. P. gas customer without first trying to make it an all-gas customer."

MARKETS

Gas dishwasher hits market

A new gas dishwasher was unveiled recently by Preway, Inc., before a group of Florida natural gas men.

The dishwasher will be marketed, first, in the parts of the country where Preway now has utility contacts for its built-in oven business.

Production will begin in June, and by August, the product will be shipped into 16 major markets.

Dishwasher capacity is a service for 12. One cycle has one 10-min wash and two six-min rinses. Water heats up to 180 degrees in the last rinse.

LPG flame cultivation tested by HPRF

Pilot studies on field drying of grain sorghum with LPG flame cultivation equipment were recently undertaken at High Plains Research Foundation, Plainview, Texas.

The purpose of the study is to permit earlier crop harvesting by determining if the field application of heat will speed up the drying process, and if the method is practical.

The moisture content in one field of treated grain sorghum dropped from 37 to 21 per cent within three days after treatment. During this same period the remainder of the field only dropped to 27 per cent.

With favorable drying weather the grain sorghum seed loses moisture at the rate of approximately 0.5 per cent per day with no treatment, after moisture content is down to 20-25 per cent. Under similar conditions, the treated grain sorghum seed lost moisture at the rate of approximately 1.0 per cent per day. Field drying of grain sorghum with heat thus offers a possibility of harvesting the crop 10 to 14 days earliler than would be possible with natural drying.

High Plains has been undertaking flame cultivation tests for the past one and a half years.

Fewer farms, but a better market

There were more changes in the character of farms and farming between 1954 and 1959 than in any other 5-year period in history, according to a summary of the 1959 Census of Agriculture, recently released by the Census Bureau.

The number of farms decreased by 23 per cent, but they were larger. The under-10-acre plots declined 50 per cent, and in other categories ranging in size to 220 acres, there were comparable numerical decreases. But farms having more than 500 acres were on the rise by substantial percentages.

Meanwhile, as aggregate market, they were becoming much more profitable for the fuel dealer. For example:

- In 1954, they spent $1,366 million for "gasoline and other petroleum fuel and oil"; in 1959, they spent $1,545 million. Average per farm jumped from $286 to $417.
- In 1954, 219 million farms reported they were using a total of 4.7 million tractors; in 1959, 2.7 million farms reported they were using 5.1 million.
- In 1959, 52,420 farms reported they had crop dryers. There were no figures for 1954.

Housing and population census

Gas Appliance Manufacturers Association and American Gas Association have become charter members of a group called the Association Council on Housing and Population Census, for which a "veritable treasure-house" of 1960 Census cross-tabulations is now being prepared.

These data, being developed by the Data Processing Center Division of S. J. Tesauro & Co., Detroit, will meet the growing needs of marketing researchers, economists and social scientists.

Gas utility buys thermoelectric unit

Northern Illinois Gas Co., Bellwood, has purchased a thermoelectric generator from Westinghouse Electric Co. The utility is using it to experiment with the possibility of creating gas

MASTER

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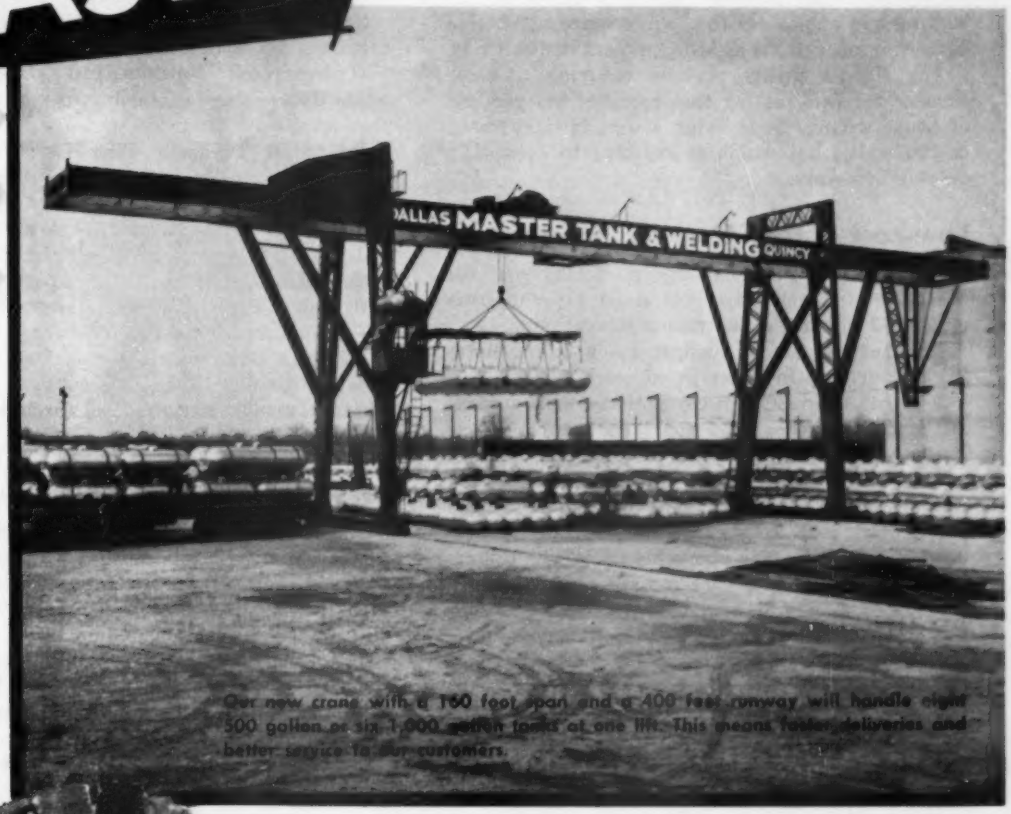

Our new crane with a 160 foot span and a 400 feet runway will handle eight 500 gallon or six 1,000 gallon tanks at one lift. This means faster deliveries and better service to our customers.

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Master gives a little more than you bargain for. The skilled personnel is equalled by the newest, finest and most modern in equipment and topped only by *proven* experience in the production of domestic propane tanks. Full loads, or partial loads... all are delivered direct to your door.

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The industry in action

heating and appliances that will require no outside current to operate its lighting, motors and controls.

The Illinois utility is now readying a home furnace for field testing that operates independent of house wiring. It is using a unit initially rated at 100 watts, but which is expected to eventually develop 200 watts.

Low-cost energy from gas foreseen

A "revolutionary" plan for producing low-cost energy in the modern school could save approximately $2 billion for the nation's taxpayers.

This savings can be realized by installing natural gas turbines in new-type compact schools.

A report from AGA discloses that a 2300-student air conditioned compact school with natural gas as its only source of power can be built for approximately $2.3 million—about 16 per cent less than the present conventional type of the same size without air conditioning. A 16 per cent cost reduction under the new plan adds up to $1.5 billion. Lower first costs in construction will result in savings of $45 million in insurance and $32 million in reduced interest on bonded indebtedness.

SUPPLY & TRANSPORTATION

Market offered for Alberta surplus

The promise of an assured market for surplus LPG from Alberta, Can., has been appended to one of the several competing applications for imports of the product into the United States.

Standard Oil Co. (Ind.) injected this factor into the complex race when it announced it was joining Pembina Pipe Line Ltd., Calgary, Alta., in the design, financing, construction, and operation of a gathering system in Alberta and a trunk line to Chicago.

Tuloma Gas Products Co., Tulsa LPG marketing subsidiary for Standard, is offering to buy natural gas liquids from Alberta producers on a 20-year basis.

Although the Standard-Pembina plan is only one of a half-dozen proposals for bringing Alberta liquids to the U. S., it's the only one that guarantees a market.

All the lines have been proposed as a means of disposing of liquids which will be stripped from the natural gas that will be exported through the Alberta-to-San Francisco line, which is now under construction. Before the end of the year, this gas line will be moving substantial volumes, which will ultimately reach 650 MMcf per day under present authorization.

Competing with Standard-Pembina for the Alberta Oil & Gas Board's approval are:

Hydrocarbons Pipeline Ltd., Calgary, which would deliver gas to Canadian points and to Interprovincial Pipe Line Co.

Provincial Products Pipe Lines, Ltd., which plans to deliver gas to Edmonton, Alta., for export through Interprovincial and Trans-Mountain Oil Pipeline Co. to the Great Lakes area of Canada and the U. S. as well as to British Columbia and Washington.

Britamoil Pipe Line Co., Ltd., which would take the liquids as far as Edmonton.

Hudson's Bay Oil & Gas Co., Ltd., which would take the product to the international border, from where it would be transported through Continental Pipe Line Co.'s lines in the U. S.

UPG contracts entire plant output

United Petroleum Gas Co.. of Minneapolis, has contracted to market the entire output of a new $350,000 propane plant at International Refineries, Inc., Wrenshall, Minn. The company delivered its first product transports in January.

The development will make possible a supply for customers in the Iron Range and North Shore areas of Minnesota in a matter of hours.

United will have transports based at nearby Carlton, Minn., to handle the product.

NEWSBRIEFS

Due to the growth of Harper-Wyman's Mexican operations, a new plant and office building have been constructed in San Bartolo, Naucalpan. Although the appliance market south of the border is less than 10 per cent, it is as large as the U. S. market, and is growing at the rate of 15 per cent a year.

Ted G. Chadwick, manufacturers' agent, and Eldon Engel, formerly with Home Gas Co., have pooled their interests and 15 years experience to form Northwest Associates, Inc., Minneapolis. They will specialize in propane equipment of various types, covering Minnesota, Iowa, the Dakotas, and western Wisconsin.

They will also offer design and consulting service to the liquefied petroleum gas industry.

H. R. Basford Co., San Francisco, was recently awarded a distributor franchise for Hamilton automatic washers and clothes dryers.

Artic Propane Ltd. of Ontario recently invested $60,000 in a new LPG plant in Porcupine which will supply that area.

YOU NEEDN'T GO AROUND IN CIRCLES

Some folks have said the LP-Gas business is like being on a merry-go-'round. But, it needn't be this way.

Half your battle is won if you have a dependable supplier that puts YOUR interests first. If you have talked to any Sinclair TRUFLAME LP-Gas distributors, you have already learned that a Sinclair contract goes all out to protect the interest of the buyer.

So if you are "going around in circles" worrying about getting top quality *consistently*, and *dependable* delivery, join the many satisfied Sinclair TRUFLAME LP-Gas distributors throughout the country.

We'll give you complete information, without obligation on your part. Just wire, call or write and one of our representatives will be on his way to see you.

Sinclair Truflame LP-GAS

Sinclair

SINCLAIR OIL & GAS COMPANY

LIQUEFIED PETROLEUM GAS SALES DEPARTMENT

SINCLAIR OIL BUILDING • PHONE LU 4-0411 • TULSA 2, OKLAHOMA

MEMBER L.P.G.A.

MEMBER NATIONAL LP-GAS COUNCIL

CAMP HILL, PA. • MITCHELL, SOUTH DAKOTA • ARLINGTON HEIGHTS, ILL. • ST. JOSEPH, MICHIGAN • MONTGOMERY, ALABAMA

IF...we could prove to your satisfaction that you could make more money as an independent Skelgas LP-Gas dealer,

...would you be interested?

FILL OUT THIS COUPON AND MAIL TODAY

Mr. Don Barton
Skelgas Marketing, Skelly Oil Company
P. O. Box 436; Kansas City 41, Missouri

Dear Mr. Barton:

Without obligation, and in complete confidence, I would be interested in discussing the profit possibilities of an independent Skelgas Franchise with one of your managers. I am particularly interested in:

- ☐ **How to gain operating cash from accounts receivable.**
- ☐ **How to double my income without additional capital investment.**
- ☐ **How to turn my bulk plant investment into an extra 150,000 gallons of gas business per year.**
- ☐ **How to make a $2,000 investment produce like $10,000.**

NAME_____

COMPANY_____

CITY_____ STATE_____

LP-GAS

MEMBER LPGA

Skelgas
SKELLY OIL COMPANY

Dependable Products

Now Skelgas has been granted the Good Housekeeping Guaranty Seal:

Already the world's most respected name in LP-Gas, Skelgas now provides further assurance of quality! During 1961, 3 full-page ads featuring Skelgas in Good Housekeeping magazine will reach 1,500,000 homes in Skelgasland.

Skelgas Constantly Pre-Sells Your Best Prospects With Hard-Hitting Ads In Leading National and Farm Magazines:

And NOW Skelgas Puts Reader's Digest To Work For You!

One of America's most influential magazines—Reader's Digest—will also be selling Skelgas in 1961. The Skelgas purity and quality story will reach 3,600,000 families with each of two full-page ads scheduled to appear in Reader's Digest.

LP-GAS

MEMBER LPGA

Skelgas

SKELLY OIL COMPANY

Dependable Products

Skelgas Marketing
Kansas City 41, Missouri

BPN NEWS PARADE

The industry in action

Permission has been granted by the Newcastle Town Council to the Saint John Propane Gas Co. in Newcastle, New Brunswick, to erect a propane gas plant.

Modern Home Products in Russell, Ill., has changed its name to Charmglow Products.

The National Coal Policy Conference sponsored an electric heating conference in Washington, D. C. on Feb. 17. Approximately 50 national organizations concerned with electrical production and manufacturing and home construction were expected to participate.

The William R. Ray Scholarship Fund, a $1000-a-year gift to a deserving student at Stanford University, has been established by General Controls Co., Glendale, Calif., of which the late Mr. Ray was one of the founders.

Hydro Butane Gas Co. of Hickman Mills, Mo., recently bought the business of Joe Peek in Warrensburg, Mo. This makes a total of six stores for Hydro Butane in central west Missouri, with more than 7000 customers.

Opening a new district office and the construction of a new underground storage terminal, both at Wood River, Ill., are the latest steps in Tuloma Gas Products Co.'s expansion program. The new office will be headed by A. Burt Davis, who will be responsible for the company's LPG marketing operations in both Missouri and Illinois.

Spencer W. Pepper, former president of Stewart Petroleums, Ltd., and Progas, Ltd., has been chosen to manage a new Canadian subsidiary of Petrolane Gas Service, Inc., Long Beach, Calif. The new company, which has been formed to market LPG in western Canada, will operate as Petrolane Gas, Ltd.

United Petroleum Gas Co.'s (Minneapolis) fleet of jumbo tank cars has been working overtime this winter to assure its customers of additional fuel, providing at the same time a stimulus for publicity in their local papers and on television. Since September, United has sent at least one shipment of LPG in a jumbo tank car to a majority of its customers, in order to introduce them to the added convenience of this new means of transportation and to give them a chance to get local newspaper coverage for their business.

A. Burt Davis

S. W. Pepper

REGEIMBAL: WASHINGTON

Minimum wage bill faces fight

President Kennedy's all-out push for raising the minimum wage and expanding coverage to many retail and service trade workers will have tough sledding in Congress.

Although the measure the President is seeking is a watered-down version of that sought by organized labor, it is still facing powerful opposition from many Republicans and Southerners in Congress, aided by most retail, industrial, and other business groups.

For L. P. gas dealers, the measure would require them to pay all employees the new minimum wage and observe the overtime provisions if they gross more than $1 million a year and if any employees were engaged in handling goods in interstate commerce.

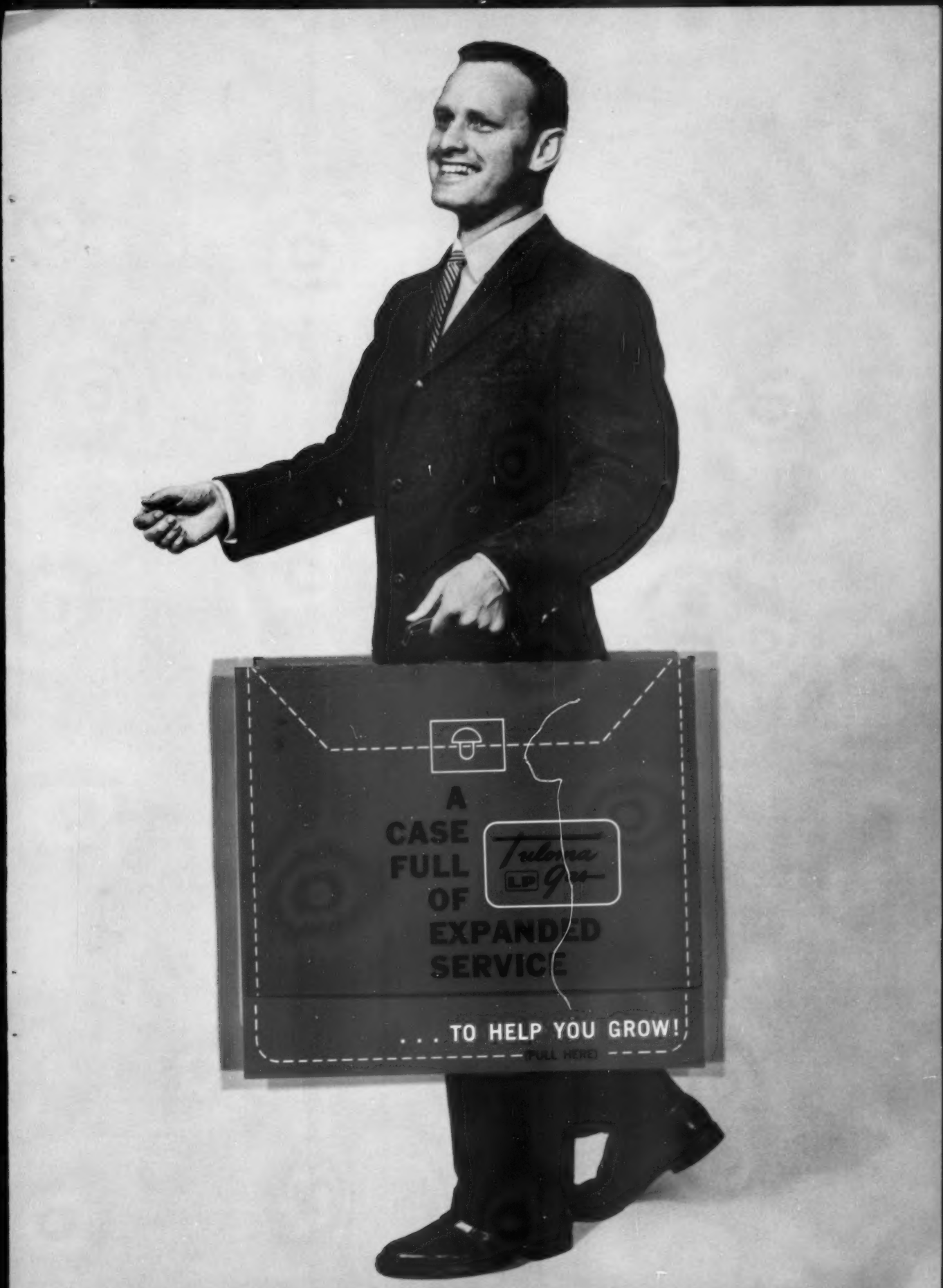
F.P.C. nominee is public power advocate

Appointment of Joseph C. Swidler as the new chairman of the Federal Power Commission could help bring an increase in public power projects. The FPC does not have a direct role in public power construction, but it does regulate rates for power which is sold across state lines and licenses private and state or municipal hydroelectric projects.

Mr. Swidler has been a public power supporter. He spent 24 years as a lawyer for the Tennessee Valley Authority, the granddaddy of all public power projects.

Farmers vote against REA

Apparently not all farmers are militant supporters of government subsidies for electric power. Rep. Paul Findley, a Pittsfield, Ill., newspaper publisher and a Republican, succeeded Rep. Edna Simpson in the farm district by campaigning on a platform calling for farmers and REA co-ops to "renounce any further desire for subsidized federal loans." He contended Americans have been "seduced by the siren song of federal aid—the mystic lure of something for nothing." He called for fiscal sanity, an end to deficit spending, and warned that these policies put our "way of life in jeopardy." His winning majority was one of the largest polled in the district.


A
CASE
FULL
OF
EXPANDED
SERVICE
Tulona
LP
. . . TO HELP YOU GROW!
(PULL HERE)

MEET THE MAN WITH THE BRIEFCASE!

THE TULOMA GAS PRODUCTS COMPANY REPRESENTATIVE IN YOUR AREA

NORTHEAST REGION
R. P. Erickson
190 State Street
Telephone: HEmlock 6-4004
Albany 10, New York

YORKTOWN DISTRICT
D. E. Hinchman
P. O. Box 328
Yorktown, Virginia
Telephone: TWilight 8-5411
Seaford, Va.

EL DORADO DISTRICT
J. D. Havens . . . . M. J. Norris, Jr.
1001 Paxton Road
Telephone: UNion 3-6670
El Dorado, Arkansas

CASPER DISTRICT
W. J. Preble . . . . . C. R. Englert
152 North Durbin, Room 110
P. O. Box 696
Telephone: 237-2415
Casper, Wyoming

HOUSTON DISTRICT
J. E. Blanco . . . . . R. L. Locke
112 Meyerland Plaza Mall—
Suite 23
Telephone: MOhawk 7-3324
Houston 35, Texas

MIDWEST REGION
D. R. Schoeneman
2313 Prospect Avenue
Telephone: CRestview 4-1664
West Des Moines, Iowa

ST. PAUL DISTRICT
J. R. Ruff
2163 East Hawthorne Avenue
Telephone: PRospect 1-7985
St. Paul 19, Minnesota

WOOD RIVER DISTRICT
A. Burt Davis
128 Hickory
Telephone: CLinton 4-8843
Wood River, Illinois

SOUTHEAST REGION
L. W. Bennett, Jr.
340 Davis Building
136 Catoma Street
Telephone: CHerry 7-7236
Montgomery, Alabama

KANSAS DISTRICT
M. W. Barker
Ralsamore Hotel, P. O. Box 828
Telephone: FLanders 6-1207
Ulysses, Kansas

MIDLAND DISTRICT
W. N. Winzeler
901 West Missouri St.
P. O. Box 1072
Telephone: MUtual 2-3943
Midland, Texas

SALT LAKE CITY DISTRICT
A. N. Fusie
Utah Oil Building, Room 520
Telephone: ELgin 9-4911
Salt Lake City 10, Utah

Look for the man with the brief case. He has a satchel full of profit making ideas, new concepts for the LP-Gas industry, plus plain old-fashioned dealer service. Why not let the man with the briefcase go over your plans for expansion. Think it over . . . then take "Tuloma and GROW!"

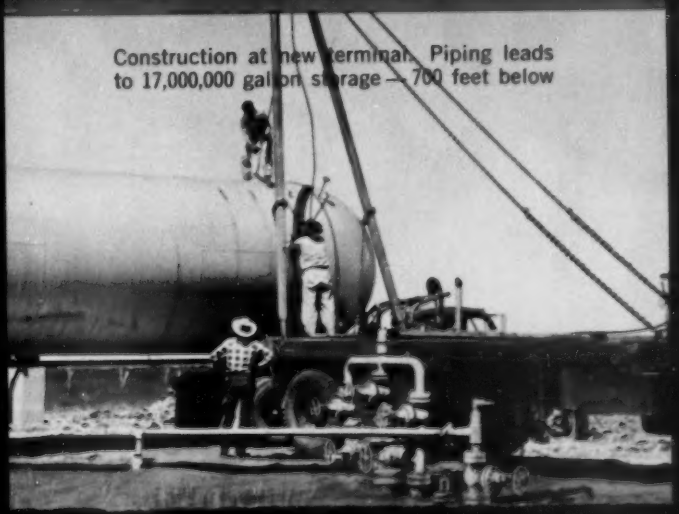
TULOMA
GAS PRODUCTS COMPANY
Pan American Building / LUther 2-3261 / Tulsa, Oklahoma

Some of world's largest LP-Gas transportation — and it's Tuloma's.

JUMBOIZED TRANSPORTS

* World's largest tank car
* Supersized transport fleet
* New and proposed pipelines

Construction at new terminal. Piping leads to 17,000,000 gallon storage — 700 feet below



ENLARGED STORAGE

* Four new underground sites
* Increased capacity at others

. . . And more under construction

Plant expansion at one of Tuloma's 57 production points.

INCREASED PRODUCTION

* production points increased
* Millions of gallons of new production

. . . And no end in sight

. . . TO HELP YOU GROW!

(FULL HOOK)

Tuloma's expansion

1 **INCREASED PRODUCTION** .....

2 **ENLARGED STORAGE** .....

3 **ADDED PIPELINES** .....

4 **EXPANDED COVERAGE** .....

5 **JUMBOIZED TRANSPORTATION** .....

. . . to bring Tuloma's "Plus Service" right to you.

. . . TO HELP YOU GROW!

BPN NEWS PARADE

The industry in action

"Lure industry with REA" is plan

A new expansion of the rural electrification program could come under the guise of water and other resources development and under the cloak of a new "rural redevelopment" program.

Reports of several White House advisory groups, including ones on depressed areas, economic development, and natural resources, have all called for a bigger government-backed rural power program as a means of boosting the economy.

Several congressmen have backed an expanded power co-op program as a means of attracting industry and business to rural areas through the lure of cheap power.

Several strong REA supporters won key Senate committee posts, including Sens. Lee Metcalf, D., Mont., Joseph Hickey, D., Wyo., Eugene McCarthy, D., Minn., and Maurine Neuberger, D., Ore.

While the new Democratic Administration was laying these plans, former President Eisenhower in his final budget message to Congress was making a last plea for creation of a special REA bank.

This bank would be established with a federal loan, but owned and managed by the REA borrowers. Eventually, the federal loan would be repaid.

Bills have been introduced in Congress to raise the current 2 per cent interest rate to a figure equal to what the U. S. Treasury pays for the money it borrows (now about 4½ per cent). Among the sponsors are Reps. James Utt and Edgar Heistand, both California Republicans. There is little chance for success, however.

Other bills affecting REA introduced in Congress include one by Rep. Heistand to ban federal loans to any REA co-op which "engages in propaganda" or attempts to influence legislation or supports a political party or candidate, and one by Sens. Wayne Morse and Maurine Neuberger, Oregon Democrats to juggle the cost of the program by requiring the loans to be carried as "investments" rather than expenditures on government books.

New Agriculture Department figures show that some 97 per cent of all farms are now electrified, with REA co-ops serving half of these plus more than 2 million non-farm consumers. Total co-op consumers hit 4.8 million during the year with 105,000 added during 1960 and another half-million scheduled to be served in the future.

REA approved $254.5 million in new loans in 1960 bringing the total for the 25-year history of the program to $4.2 billion. Included was the largest single loan in the REA history—$25.8 million to Southern Illinois Power Cooperative.

Fuels policy threat grows

The drive for a national fuels policy is developing a full head of steam, with Democratic congressional leaders and the Kennedy Administration fueling the boiler.

Bills to set up a joint Senate-House committee to study the national fuels proposal are pending on both sides of Capitol Hill.

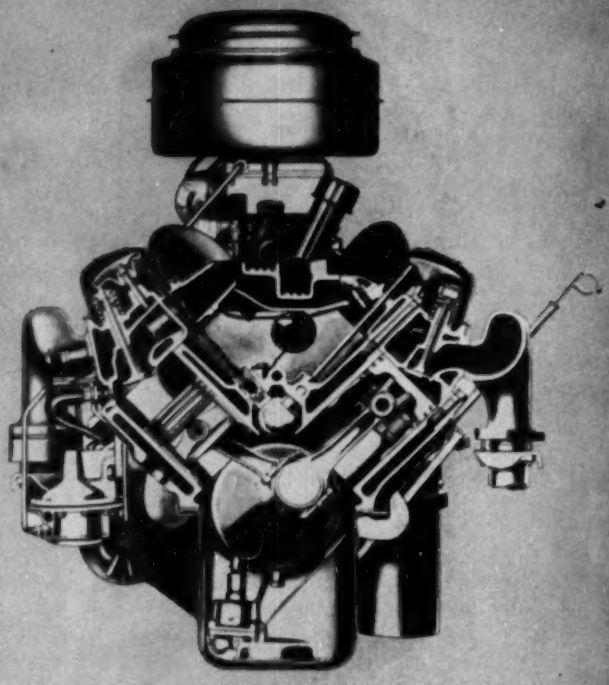
The natural gas and petroleum industries have opposed the study because they say it will unquestionably result in the coal-industry-sponsored limitations on sales of gas and other "high-grade fuels" for industrial uses. They have, however, promised cooperation.

CURRENT L.P. GAS & L.R. GAS PRODUCTION & INVENTORIES

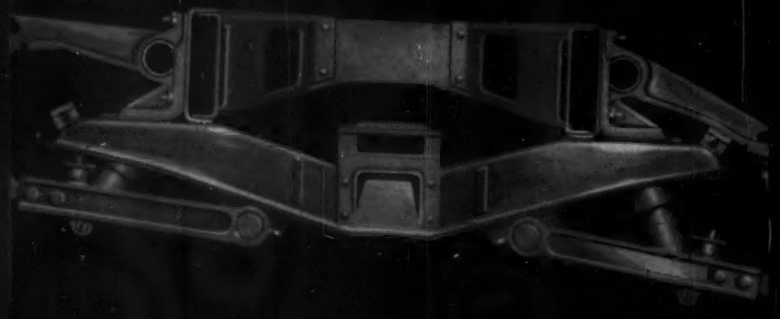
(A.P.I. figures—in thousands of gallons)

	Propane	Butane	Bu-Pro Mix	Iso-Butane	Other Mixes	Total LPG	Total LRG
Production (U.S.)							
Jan. '61	342,865	186,266	58,546	69,132	70,933	727,742	286,691
Jan. '60	379,517	193,861	48,608	57,294	74,071	753,351	262,444
'61 to date	4,507,470	2,242,199	702,241	752,489	933,080	9,130,479	3,502,023
'60 same period	4,087,577	2,207,375	733,353	697,875	848,084	8,574,174	3,061,766
Inventories (1-31-61)							
Zone A	11,659	655	20	...	5	12,339	14,829
Zone B	45,172	10,538	1,038	829	993	58,570	24,218
Zone C	84,237	20,555	547	4,101	...	109,440	10,568
Zone D	67,033	9,078	15,591	1,549	179	93,430	584
Zone E	114,081	75,737	1,876	33,117	17,243	231,178	64,429
Zone F	154,267	47,370	1,150	17,346	59	220,192	3,590
Zone G	4,015	1,082	9,008	...	70	14,175	939
Zone H	929	303	159	142	110	1,643	36,819
U.S.	481,393	165,318	29,389	46,208	18,659	740,967	155,976
U.S. (1-31-60)	425,021	129,466	25,293	36,550	21,517	637,847	95,871

1 Extra strength where it counts gives Chevy cabs rock solid rigidity to stay in shape years longer.



2 **Chevy's powerful, efficient Taskmaster V8 combines big-truck might and muscle with top operating economy.**



3 Independent Front Suspension with "walking wheel" action paves the way to bigger earnings with a smoother ride and reduced maintenance expense.

DEEP-DOWN DURABILITY SAVES YOUR DOLLARS IN 1961 CHEVROLET MEDIUM-DUTY TRUCKS

Here are Chevy components that add to tough-truck durability and earning ability; the *strong* reasons why a Chevrolet middleweight can take plenty of punishment—and keep on taking it. Here's why these rough-and-ready haulers squeeze bonus earnings out of tight budgets!

1 Take a look at the Chevy cab (pictured at left). It's built *solidly* to take any poundings your rough-and-tumble runs can throw its way; to stay in shape for years, lengthen effective truck working life and minimize maintenance expense. Notice the husky longitudinal sills that reinforce the cab underbody to reduce vibration and provide a solid foundation for cab sheet metal. Check the extra sturdy door openings with box-section pillars and sills to keep doors weather-tight and in lasting alignment. See how the husky box-section pillars support the rigid, double-walled roof panel for greater safety and maximum cab strength. (And this cab is just as *comfortable* as it is rugged!)

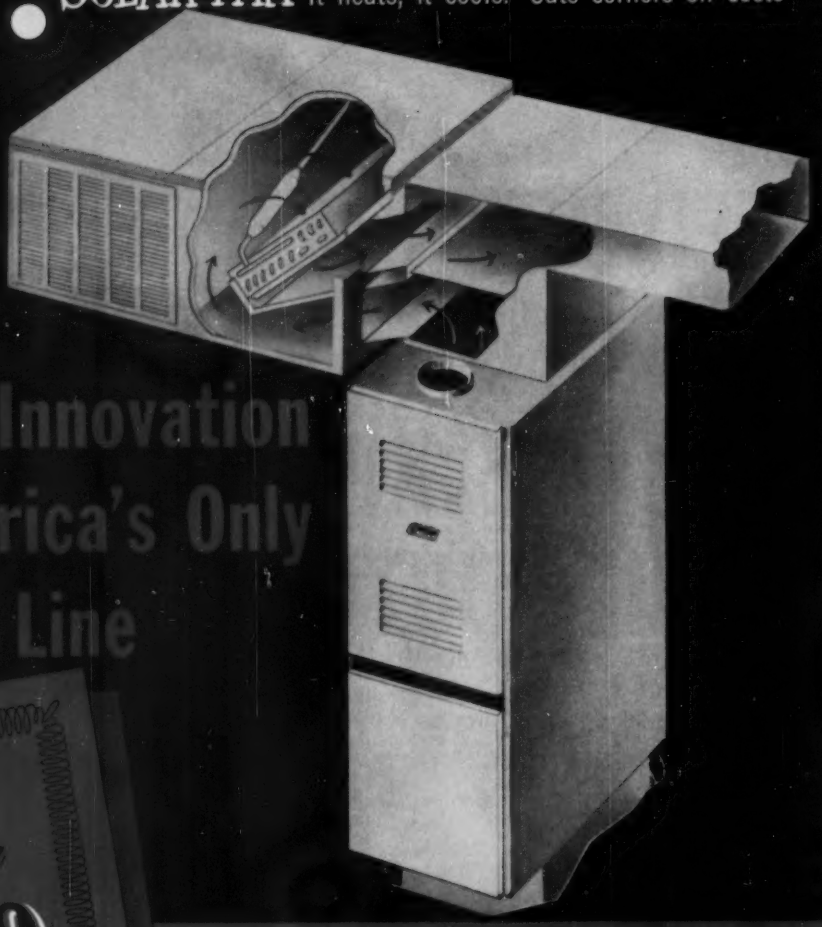
2 More evidence of Chevy's deep-down strength and toughness can be found beneath the hood. There you'll find the *261-cubic-inch Jobmaster 6*—a work-proved dollar-saver. Its sturdy components—forged steel crankshaft, high-alloy inlet valves, precision bearings, hard-faced exhaust valves with Rotocoils, all-weather electrical system and many more—are solid assurance of maximum efficiency and economy. Or the big *283-cubic-inch Taskmaster V8* illustrated at left (optional at extra cost) to supply plenty of torque to move maximum payloads with minimum strain or wear. Low maintenance costs stem from features like aluminized high-alloy inlet valves, hard-faced exhaust valves with Rotocoils and Moraine 400 precision bearings.

3 Chevy's bump-beating Independent Front Suspension system provides still another reason for dollar-saving durability. Tough, friction-free torsion springs cushion the ride; ruggedly built control arms guide each wheel to give sure, stable handling; sturdy, custom-tailored shock absorbers further reduce road shock and offer maximum ride control. The result is a new kind of smooth truck ride that lengthens truck life; cuts wear and tear to reduce maintenance. These reasons for ruggedness go on and on to help reduce your costs. They're all the result of Chevy's *deep-down durability*. See your dealer about it soon. . . . Chevrolet Division of General Motors, Detroit 2, Michigan.

CHEVROLET POWERMATIC, developed especially for big truck duty, provides fully automatic driving ease for all Series 60 and 60-H models (optional at extra cost). With six forward speeds in four driving ranges, plus torque converter action for getting under way and cushioning drive-line shifting shocks, Powermatic adjusts automatically to load and road conditions.

1961 CHEVROLET STURDI-BILT TRUCKS CHEVROLET

Coleman POLAR SOLAR PAK It heats, it cools. Cuts corners on costs



Another Innovation In America's Only Bonded Line

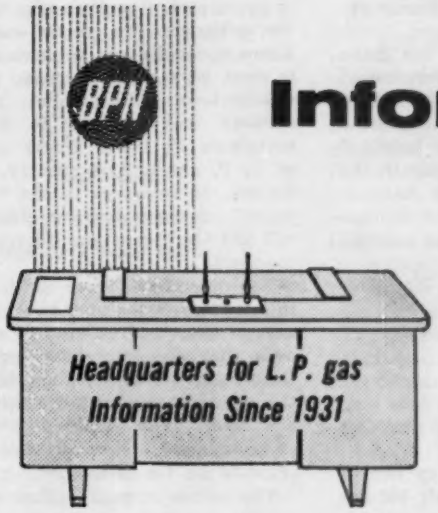
SIMPLE . . . DIRECT . . . LOW-COST

So easy! Just short-couple a 2 or 3 h.p. Coleman Polar-Pak unit to a Coleman furnace and your customer has a Polar-Solar-Pak installation. Furnace blower only is needed for complete circulation of conditioned air — summer and winter. No refrigerant lines. No costly transition ducts. You can do the job at remarkably low cost.

Unlimited application—basement, slab, crawl-space, attic, tri-levels, apartment houses. Furnace and cooling unit each backed by Coleman's famous warranty bond. Ask your Coleman distributor or write

The Coleman Company, Inc.
Wichita 1, Kansas

Coleman builds the most complete and only bonded line of heating and air conditioning. Investigate!



Information Desk

How to convert Freon cylinders to LPG use . . . What equipment is suitable for manure drying? . . . Formula for mixing in methanol to prevent freeze-ups.

Precautions to heed when filling cylinders

New York

I would like to know if there are any laws to prevent selling propane gas on a cash-and-carry basis, either federal or state.

I have bought some cylinders and would like to know if they would be legal and safe to use for propane gas. They have the following information on them: United States, Freon-12, ICC4 B225, 109504, 12-51 PST, TW 50, and WC 122.7.

If you cannot give me this information please tell me where I can find it.

P. E. W.

There are no laws, either federal or state that we know about, which prevent a dealer from selling propane on a cash-and-carry basis. You should, however, check with your state and local authorities who administer the L. P. gas codes. Also, the Bureau of Weights and Measures in your area and state should be contacted, and any special regulations checked out regarding the method of measuring and pricing the fuel in cash-and-carry cylinders. Some areas are rather specific and arbitrary about the methods of measuring or pricing fuel in small cylinders.

The ICC4B225 denotes that the cylinder was manufactured in accordance with the Interstate Commerce Commission's specification 4B for a working pressure of 225 psig. Cylinders manufactured under the 4B specification meet the ICC requirement for L. P. gas. 109504 is the serial number and 12-51 denotes it was manufactured in December 1951. PST is the manufacturer's symbol, which, in this case, is Pressed Steel Tank. TW 50 denotes the tare weight and WC 122.7 says it has a water capacity of 122.7 lbs.

You should obtain a table of filling densities so that the cylinder can be filled with the proper amount of propane. This is very important because cylinders cannot be filled completely full. Propane has a high coefficient of expansion and a cylinder that is overfilled may expand if warmed up due to warmer weather or direct sunshine on it. There is a table of "Maximum Permitted Filling Density" on page 24 of Pamphlet 58, "Standard for the Storage and Handling of Liquefied Petroleum Gases," May 1960 edition. Copies can be obtained from the National Fire Protection Association, 60 Batterymarch, Boston, Mass., at 50 cents per copy.

The cylinders you have purchased were made for Freon-12 gas and should be carefully cleaned out before using them for L. P. gas. Also, the valves and safety devices should be replaced with types that are approved for propane service.—Ed.

Manure drying is new field for industry

Virginia

Will you kindly give us any information you may have on drying chicken manure for the purpose of packaging it for commercial sales?

The amount involved would be about 300 tons per year or approximately a ton a day, after drying.

M. H. B.

Regarding equipment for drying chicken manure, we did not know of such equipment when you wrote to us, and we have not been able to find anyone who does have such equipment.

It is possible that some of the crop-drier manufacturers build equipment that can be adapted to this use.

For names and addresses of crop-drier manufacturers, see the latest edition of the *BPN Catalog & Buyer's Guide*.—Ed.

Volkswagen truck converted to LPG

Nebraska

We would appreciate suggestions for converting a Volkswagen truck to propane. It will be necessary for this truck to operate in sub-zero weather and, consequently, it should have some type of vaporizer. We would prefer that it be a dual fuel, gasoline-propane job.

Incidentally, this truck will operate approximately 80,000 miles per year.

R. M. L.

One method which is proving very successful has been used in Holland.

The Volkswagen engine is air cooled and no cooling water is available which can be used as a heat transporting medium. Rather than use the exhaust gas-heated system, which is unsafe and does not have a constant mixture strength, a small water tank—2½ gal.—was installed for an auxiliary water system.

Through the steel pipe running from the exhaust, another pipe for water circulation was run. The system works very satisfactorily with-

out freeze-ups, and the cooling water circulates by thermosyphon action only.

Other methods, such as using a blast of air from the fan or incorporating oil from the crankcase, have met with varied success.—Ed.

Trailer bottles easily refilled in USA

London, Eng.

I visited the Caravan Exhibition at Olympia, London, recently and talked to the Shell-Mex and BP Gases Ltd. regarding the supply of butane or similar type of gas available in America, since I was having a refit of my motorized caravan before setting out for a 9-month tour of the U. S. I am visiting London from Australia and so far have toured 20,000 miles on the continent. In England and Scotland I have found difficulty in obtaining supplies of gas. The above mentioned people kindly referred me to you.

Could you please let me have information relative to the size of the bottles available, and if they are interchangeable from one state to another. On the other hand, if I brought my English bottle in the van, would I be able to have it refilled easily? Would new fittings be necessary or is there an adapter I could buy?

W. G. S.

The approximate dimensions of most cylinders or bottles used in this country are 14 in. diam. by 18 to 20 in. high including the base ring at the bottom and the valve guard at the top.

Usually our trailers carry two of these small cylinders securely but not permanently fastened to a suitable support on the trailer hitch or tow framework. When one becomes empty, the second is used to supply the fuel. The empty one is refilled at a station equipped to perform the service, then returned to the support bracket as the spare cylinder.

Cylinders of this type are not usually exchanged in this country unless the supplier of fuel has a group of customers who are relatively permanent. Suppliers who can fill the cylinders are fairly common. There is usually one or more nearby in most cities, even in many of the smaller towns. Also gasoline (petrol) stations, may be able to fill the containers as many trucks operate on L. P. gas in this country. Local inquiry, or reference to the "yellow pages" of our telephone directories will list the names and addresses of suppliers.

You may have some difficulty in this country if the cylinders you use are not made and stamped in accordance with our Interstate Commerce Commission (ICC) markings denoting the specifications under which they are made, their working pressure, capacity, and other pertinent data required by the codes.

The valves in your cylinders may or may not be the same as predominantly used in this country. Valves patterned along the same lines as the majority of those used here are used in Europe and other countries throughout the world. This valve has a standard female POL left-hand thread. However, there are special valves used by certain companies or in certain areas that have special threads. Usually adapters are available for filling the more common

Nor-Tex "SAFETY LINERS"

SAVE MORE MONEY

EARN MORE MONEY

You'll haul MORE GAS and LESS STEEL than ever before with a skillfully engineered, smart looking, streamlined Nor-Tex transport of T-1 and A-202B steel built to latest code ICC-MC-330. All fittings are recessed for safety. Exclusive Nor-Tex swirlproof SUMP permits easy unloading of EVERY DROP OF GAS. More safety and profit "extras" for you because they are built by men with years of actual bulk plant experience. Get the facts! Write, wire or phone collect today.

WE ARE TRUCK DISTRIBUTORS

National Sales Agents For

Phone 382-5416

P. O. BOX 1219 **NORTH TEXAS TANK CO.** DENTON, TEXAS

"special" connections. Nearly all our cylinder valves have a ¾-in. NPT male thread for connecting into the opening of the cylinder.—Ed.

Best way to prevent regulator freeze-ups

Ohio

We are coming into a season when we might be faced with regulator freeze-ups. Some years ago you had an article that described a mixture of the glycerine and alcohol.

We have lost the formula and would appreciate it if you would send it to us. When we used this formula, we had very little difficulty with our regulators.

E. R. G.

I do not find any reference in the back issues of our magazine to a mixture such as you describe. However, many dealers find that methyl alcohol or methanol added to each container in the ratio of about 1 qt per 1000 gal of L. P. gas will effectively reduce freezing problems.

Of course, the proper manner to prevent freeze-ups is to keep moisture out of the fuel. This is dependent upon receiving a clean, dry fuel and having the customer's tanks dry before fuel is placed in them. Take good care of your own and the customer's equipment. Keep filler valves, hose lines and other openings capped when not in use. Remember that splashing water, rain and snow entering fittings or hose lines can be forced into tanks and contaminate the fuel enough to cause freeze-ups. It is most often such seemingly minor items as these that can cause the biggest headaches.—Ed.

LPG deliveries limited in gallons

Illinois

Recently I have had several customers with good size storage tanks who limit their deliveries in gallons. They claim that they get better results by doing so.

Are there any advantages from such practice?

R. E. L.

There is no reason, other than psychological, that I know about that will bear out your customer's contention.

Two or three smaller fuel bills may not be as shocking or as indelibly printed in their memory as one larger bill.—Ed.

Does anybody make L. P. gas engine heads?

Arkansas

Could you give me the name of any company who manufactures L. P. gas engine heads for a 1955, 6-cylinder Chevrolet truck?

A. B. W.

We do not know of any company which manufactures cylinder heads especially for service with L. P. gas as the fuel.

There are several companies which make high-altitude pistons and other similar parts on an independent basis. Your automotive parts supply house may know of some company that manufactures the head you desire.—Ed.

BOBTAILS

BIGGER PAYLOADS

Choose From 4 Models-8 Styles

★ STANDARD ★ PAYLOAD

★ CUSTOM ★ DE LUXE

Sleek, LIGHT-WEIGHT, streamlined twin or single barrel BOBTAILS featuring Nor-Tex pioneered ALUMINUM SKIRTING and CABINETS. Practical engineered 3000 WG units and over, on cab-over or cab-forward trucks, are still within the 18,000-lb. axle limit. High-flow plumbing delivers "extra" gallons faster. For efficiency, durability, payload, fast loading and unloading, balance and appearance, Nor-Tex BOBTAILS just can't be beat!

BALANCE YOUR LOAD THE NOR-TEX WAY

... Finance the Balance

HAUL MORE GAS and LESS STEEL Than Ever Before.

Dependable ROUTE-RATED Units

As costs increase and profit declines, guess-calculations of delivery unit size becomes more and more hazardous. It's no wonder Nor-Tex Route-Rating service has grown so popular. Units are built to fit your need, based on length of route, terrain covered, convenience of cabinet location, and trips required on peak loads. "Route-Rating" helps you deliver extra gallons, work fewer hours, drive less miles and eliminates costly overtime expense.

Aluminum Skirting and Cabinets

Phone 382-5416

P. O. BOX 1219 NORTH TEXAS TANK CO. DENTON, TEXAS

More *profit*-ability from Robertshaw

Trained service men keep your gas appliances sold!

Every working day . . . the year 'round . . . there's a Robertshaw service training school in session somewhere . . . and this 14-year-old service training program is the *model of the industry*. The program is free . . . all you need supply is your men and their time.

From Santa Maria, California to Garden City, Long Island, gas utilities, appliance manufacturers and dealers send *students* to regularly scheduled service training schools, usually within easy commuting distance.

To keep all your gas appliances sold . . . specify Robertshaw FLAME MASTER and FLAME SET controls on your gas ranges and keep your service men well-trained. For further information on Robertshaw's Service School schedule, write Robertshaw Thermostat Division, Department VMA 7652, Robertshaw-Fulton Controls Company, Youngwood, Penna. VMA-7652

Robertshaw

. . . the name that MEANS temperature control

Beyond the Mains

By WILLIAM W. CLARK • Editor

The stage is set

THE OLD IDEA ABOUT "BETTER MOUSETRAPS" has been pretty well discredited in recent years. Nobody is beating a path to anyone's door. Markets aren't built on automatic demand. Demand must be created.

Within the petroleum family, complex as it is, the creation of demand can be traced back beyond the sales organizations right to the source of supply. The relationships of our particular "cut of the barrel" to the other petroleum-derived fuels has been of tremendous importance in shaping our markets. These markets carry a multiple lock—and one of the keys that open it is surely production.

So it must come as good news to find growing evidence that, at the producing end, our place in the petroleum family is steadily becoming more important.

Rather impressive evidence comes from the year-end report of the Texas Railroad Commission, which has jurisdiction over production in the nation's No. 1 producing state. The commission can, and does, pro-rate the output of the state's wells.

In 1960, according to the report, crude oil production was going nowhere. It was the same old story, told over and over again in the past few years. By contrast, the report noted, the yield in natural gas liquids averaged more than 600,000 bbl. per day. This was 28 per cent more than the 1958 yield. It was also equal to one-fourth of all crude oil production.

In commenting on these facts, the "Dallas Morning News" declared that they "pinpoint an industry fact of life which is becoming more pronounced each year—the increasing importance of natural gas liquids as an economic return for producers."

Further: "Rail board figures positively show that more and more Texas oilmen are searching for and developing gas reservoirs. For example, there were 2131 gas well completions last year, 306 more than in 1959." And with natural gas comes natural gas liquids. (The newer gas fields, we are told, are "wetter" than the old.) In straining for all possible profits, producers are putting more emphasis on stripping out all the liquids they can.

With this growing importance must surely come growing awareness. With growing awareness, our industry should start shedding some of the raiment of the stepchild.

Added evidence can be found in a similar report from Canada. At year's end, the president of the Canadian Petroleum Assn. said that production and use of crude had dipped about 4000 bbl. per day, or 1 per cent, in 1960. He also noted that "the mounting displacement of crude oil by natural gas liquids and, to a lesser extent, the continuing replacement of natural gas as a heating fuel also have had their toll on the industry during the year."

All this would seem to set the stage for this spring's massed push for recognition by the big producers. The API is going to be given the full sales story on LPG. And the LPGA is shaping up its convention program to accomplish the same thing. As announced in last month's issue, Frank M. Porter, president of the American Petroleum Institute, has been signed up to deliver the keynote address at the big annual LPGA show in Chicago May 1. With this as a lure, the association is hopeful it can attract the *chief* executives of major LPG producing companies to the convention.

The time certainly appears to be ripe. Let's hope 1961 goes down as the year when L.P. gas first began to be recognized as a full-fledged partner in the petroleum products complex. ■

Available in 3 models, combines central heat efficiency with gas heater economy.

Number One Salesmaker for '61 Martin Duo-Vent thru-the-wall Heaters

If you want more gas heater volume, and more profits, here's the sales-tested answer. Martin introduced the Duo-Vent last season. The combination of Martin engineering, Continental Console Styling and High Fidelity Heat resulted in so much consumer acceptance and consumer satisfaction that the Duo-Vent line has been expanded to three models for 1961.

If you aren't already handling the Martin Duo-Vent series, better get the complete Martin story now. For full details on America's most complete and most profitable line of gas heating equipment, see your Martin distributor, or write direct.

MEMBER LPCA

See the Martin Line at the Atlanta Southeastern LPGA Convention, Booths 47 and 48, and at the Chicago LPGA Convention, Booths 207 and 208.

Martin STAMPING & STOVE COMPANY
HUNTSVILLE, ALABAMA

AMERICA'S MOST COMPLETE HEATING LINE

The truth about electric heat

Its proponents have taken one part fact, 99 parts fiction, and cooked up a sales story that has won over a lot of home owners. Here are the claims and the facts with which to refute them.

WILLIAM W. CLARK • Editor

DOES IT HAVE A FUTURE?

THE BIG DOMESTIC LOAD FOR ELECTRICITY IN THE YEARS to come will be heating. The bigger it becomes, the smaller will be gas' share of the entire domestic market.

That's the way the kilowatters see it, at least. Right now they are doing everything in their power to bring the shift in heating fuels about.

The threat is immediate. Electric heating as a method is not in its infancy, even if, as a science, it is still in diapers.

The groundwork for the invasion of the furnace was laid more than 20 years ago[1]. At that time, the electric industry was already in the air conditioning business. It was beginning to foresee the inevitable result of this growing load. The more popular air conditioning would become, the more severe would become the summer peak. Air conditioning would *have* to become all-electric, the year around, if it were to become an *economic* major load.

Like any innovation, it was slow to catch on. By 1950 there were only 87,000 homes using it[2]. But it was beginning to gather momentum, and each succeeding year saw a larger increase in sales than the year before.

Exact census figures for the past few years are difficult to obtain. Agencies who have gathered such statistics fail to agree on numbers. However, one association lists the number of units in use in the U. S. as follows:

1951	98,000
1953	140,000
1955	240,000
1957	390,000
1958	490,000
1959	600,000

At a recent meeting of the API Division of Marketing, it was reported that electrically heated homes totaled 719,000 as of Sept. 1, 1960. Philip Sporn, president of American Electric Power, was quoted[3] in 1959 as saying that "today only about 500,000 homes are heated with electricity—35,000 with heat pumps, 465,000 with direct (resistance) heat."

An ad in the "Saturday Evening Post" issue of Sept. 24, 1960, stated that "more than 850,000 American families" had "total electric" Medallion homes.

No matter whose figures you choose to accept, it's

obvious that the electric utilities are making great progress in this thing called "total electric living." The Department of Commerce publication, "Construction Review,"[4] reported last July that "the annual volume (of heating equipment) manufactured for habitable structures is approximately $387 million, including electric heat, warm air furnaces, and cast iron heating boilers. Of this total, approximately 46 per cent use gas as a heat source, 42 per cent oil, *7 per cent electrically*, and 5 per cent solid fuel." (Note: Electricity has already passed "King Coal"!)

In dollars, the "Construction Review" report shows that electric heating shipments in 1959 totaled $27,834,294, which is more than 7 per cent of the grand total.

As for the future, you get all kinds of startling estimates, depending upon whom you talk to or which source you read.

Says Philip Sporn[3] "We believe that by 1978 it is possible we will have electric heat in 18 million homes, one out of every four. This will mean selling electric heat into 40 per cent of the 30 million homes that will be built in the next two decades. It will also mean selling it as a replacement fuel into 6 million existing homes."

In a short-term prediction, Ole Hill of Commonwealth Edison, Chicago, predicted[3] that 1¾ million homes will be electrically heated in 1965.

M. H. Wessel of Cavalier Corp.[3] estimated there would be 3 million electrically heated homes in 1970.

The electric manufacturers and utilities are not depending upon some occult magic to bring this about. They are spending—and will spend huge sums to see that it does. It has been reported that in 1960[1], the electric industry allocated $20 million to promote electric heat. Its advertising has taken a clearly perceptible shift away from cooking and water heating, and toward home heating. Saturday Evening Post, Life, and Good Housekeeping carried big ad spreads featuring electric heat during 1960[1]. In February a year ago, 80-some newspapers from Canada to Mexico, from the Atlantic Coast to the Pacific, carried full page ads in their Sunday supplements on the same day. All stressed electric heating[1].

In 1957[1], only 29 per cent of all electric utilities actively promoted electric heat. In 1959, their numbers had been swelled to 58 per cent; in 1960, to 77 per cent.

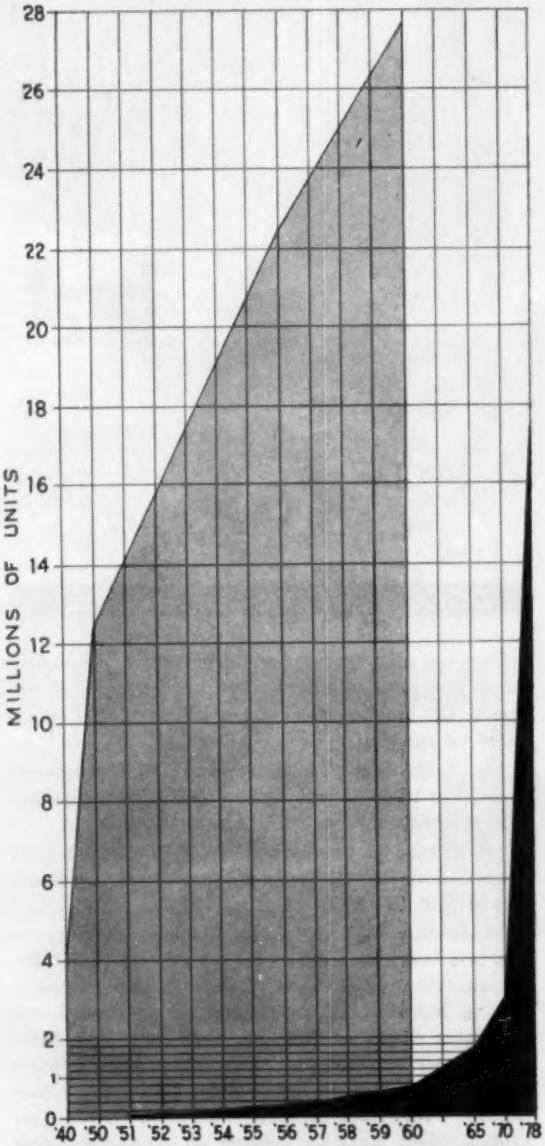
To show just how deadly serious the kilowatters are about this load, in 1960 General Electric's advertising budget[5] for the promotion of electric heat exceeded anticjpated gross sales by somewhere between 30 and 70 per cent.

The electric utilities are also busily giving money away to get the electric load. Sioux Valley Empire Electric Association, Inc., Colman, South Dakota, ran ads which promised, "Old home or new home, install electric heat and get a 200-amp electric service entrance (worth $250) free." In one case[5], the Chicago electric utility subsidized an apartment with $55,000 worth of advertising in newspapers, radio, and television in exchange for the privilege of putting electric heating into the units.

It has been common practice for this and other utilities to pay engineering fees to get electricity placed in schools and institutions.

Why all this flurry of activity? Is the summer peak-load problem as serious as all that?

Says Edwin Vennard, executive vice president, E. E. I.: "Because of air conditioning more than half the country has a summer peak in electric demand[3]." Says Merrill Skinner, Vice President



Will electric heat enjoy the phenomenal success that gas heat enjoyed in the past decade? The kilowatters think it will. The grey area depicts the gas heat sales curve from 1940 to 1960; the black depicts the electric utilities' expectations. Within 5 years, they look for the sales curve to begin to soar.

of Union Electric Co., St. Louis: "The utilities must do something to get more winter load to fill up the valley between summer peaks. We have room to add 25,000 electrically heated homes without adding one kilowatt of extra generating power. Companies to the south of us have more off-peak capacity than that.[3]"

Anyone who has had experience with peaks and valleys can appreciate the seriousness of the situation. Idle capital equipment is a heavy financial drain. Gas utilities sell summer-load gas at "dump" rates; LPG suppliers drop their prices when supply outruns demand. The electric utilities are no different; their generating capacity must be used at a high load factor if it is to pay out.

Another reason why heating is a *must* load for electric utilities is that they are drawing ever closer to a reasonable saturation figure in conventional domestic appliances. The days of spectacular growth are over. At the end of 1959, there were 17 million electric ranges in use as against just over 8 million ten years earlier. Annual sales of ranges are now just about holding even, year by year. Water heater sales are doing less well today than they were in the middle fifties. Gas clothes dryers are making serious inroads into the clothes dryer field, once almost electricity's private preserve.

In its fight against a reawakened gas industry, there is still one especially promising battleground for electricity—the heating load. If the electric utilities sell their fuel for heat, the other domestic uses are a cinch to fall into line. Once gas is barred from the basement, it's going to find itself out of the kitchen as well.

It is also a matter of record that in the past, before electric heat was really fully developed, electric utilities actively promoted oil heat. Why? Obviously to keep gas out of the home. They realized that if they could bar it from the furnace, it was out of the kitchen for good.

Paul W. Emler[2] spells out the necessity of selling electric heat in these words: "Our residential load can continue to grow from more customers due to population growth, and from the sale of more accepted appliances. But this growth is limited. Even if it were possible for us to reach a saturation figure of 100 per cent for electric ranges, water heaters, and clothes dryers, our average use would probably not exceed 7000 or 8000 kwh per year.

"Consider also that as the years roll by and saturations on appliances build up, it becomes harder to push the saturation higher and still higher. . . .

"On the other hand, we can—if we promote and sell electric heating—set our sights on an average use of 10,000 kwh per year per customer as a relatively immediate goal and can put 20,000 kph per year on the horizon. . . . "

Says another electric utility representative: "The only way utilities can reach saturation is with electric heating."[3]

And another: "The market potential is terrific. By 1980, the additional load could be 350 billion kwh, or as much as total sales to all ultimate consumers in 1952."[3]

Says C. K. Rieger of GE: "At General Electric, we have a tremendous stake in househeating. Electric heat is fundamental to our future if we are to protect our investment in the major appliance business."[3]

With this evidence, there can be little doubt that electric heat is *the* domestic load of the future, in the eyes of the kilowatters. If they are correct, this will open the way for a great game of camel in the tent. Consider what will happen in the new home: There will be no chimneys and no vents, so a change back to "combustion" fuels would be costly and disruptive. They will work to promote basementless houses or houses that allow no room for furnaces. So a customer doesn't like electric heat and wants to change back to gas? He'll have to pay the piper first. Many, of course, have already done just that.

IS IT A REAL THREAT BEYOND THE MAINS?

ALTHOUGH, AS PHILIP SPORN HAS BEEN QUOTED AS SAYING, electric heat must be introduced into 6 million homes in order for his goal of 18 million homes in 1978 to be achieved, the most immediate threat is in new construction. It will be in builder homes primarily, because many builders will take the subsidies offered by the utilities and hang the operating costs. Since most builder homes are the prospects of natural gas utilities (either immediately or soon), the problem is of more immediate concern to our city cohorts than to us. However, trends in city dwellings ultimately spread to the country: this has been demonstrated time and again.

Admittedly, again, a lot of the LPG dealer's installation business is of the replacement type. So the likelihood of his being faced with a house not planned for a chimney or vents is, in the immediate future, not great.

So he might discount the short-term threat of being permanently barred from the furnace room. On the other hand, he is as vulnerable on replacement business as is his gas utility brother. Electric heat *can* replace existing gas systems; it's possible to use the same ductwork. Or to ignore it completely.

All of these potential threats have to do with central heating, and since a majority of the dealers are concerned more with direct heating, many of them are lulled into false security. Some of those

who participated in our round-table-in-print on the subject of electric heat's threat (see December 1960, January and February 1961) felt it was *not* a threat to this wedge of the market.

However, the facts dispute this conclusion. Most heating equipment being sold is the direct type. The No. 1 seller is the radiant baseboard, which in most instances is not hooked up to a central furnace. This accounted for 29.9 per cent of the dollar value of all units built in 1959. Convectors with fan took 20.1 per cent, without fan 15.3. Glass panels, radiant and baseboard together, totaled 7.5 per cent; unit heaters and unit ventilators, 30.3 per cent; cable systems, 5.6 per cent. Central warm air furnaces accounted for only 0.3 per cent.

One utility executive says[3] that only 7.1 per cent of all electric heat systems are the much publicized heat pumps. The rest are direct resistance units.

As of early 1960, the relative volumes of units in use were as follows: Ceiling cable, 28.7 per cent; ceramic core, 25.8 per cent; baseboard, 15.9 per cent; wall units, circulating fan-type, 12.3 per cent; heat pumps, 7.9 per cent; wall units, radiant glass, 4.2 per cent; portables, 2.8 per cent; furnaces, 0.4 per cent; other, 2.0 per cent.[10]

Those who deny that electric heat is a threat to the direct heat business might be thinking of the *construction* problem rather than the heat source. Ceiling cables, for example, are a construction item, even though they are classed as direct heat units. They are not easy to "hang on" as are some direct gas units. But electric panels and baseboard are.

In some areas, electric heat is a top seller for supplemental heating, and has been for years. In the south and southwest, for example, people like to have separate heat sources for the bathrooms. On many balmy days, the central thermostat will have been satisfied but the bathroom is a little chilly for a person who has just stepped out of the bath. He likes to have a quick shot of heat. So whether they have the central heat ducted into bathrooms or not, they like to have a localized heat source so they don't heat up the entire house to a nitch above the normal comfort level.

Why should electricity be favored over gas for this application? Well, there was no venting to be considered, for one thing. And contractors have been thoroughly sold on the idea that electric heat is "safer" in the bathroom.

WHO RECOGNIZES THE THREAT? WHAT'S BEING DONE ABOUT IT?

The AGA's advertising program combatting electric heat is already well under way. The emphasis is on fresh air vs. stale air. The most effective campaigns can be waged on this issue since, next to cost, stale air is the electric systems' greatest weakness.

THE AGA, WHICH HAS BEEN SURPRISINGLY QUICK-FOOTED FOR AN ORGANIZATION of inherently conservative utilities, acknowledges that the threat is serious. This awareness materialized into specific programs in the late 1950's. In typically sound fashion, the utilities began with investigations of the competitive facts, setting up test cases for study under the banner of the AGA Committee on Comparison of Competitive Services. Having proceeded far enough to be satisfied of the security of their position, they launched a full-scale (but still underfinanced) salient in 1960.

More than $500,000 was earmarked for the heating load battle. Of this, $117,000 was allocated for research on gas heating, $65,000 for continuation of engineering studies, consumer research, and other market studies; the remainder was for promotion and advertising. But for direct advertising alone, only $70,000 was made available.

In 1959, AGA had appealed to GAMA for $100,000 to supplement its own budget. E. A. Norman, president of Norman Products Co., Columbus, Ohio, and president of GAMA at the time, spearheaded a drive to win an affirmative reply to the request. Said he:

"Collectively, you and I sell gas heating equipment to the tune of $300 million a year. The public spends close to $1.5 billion per year on gas and oil heating equipment.

"Is it any wonder that the electric industry covets the heating market?"

Most equipment is the direct heating type

The heating manufacturer members of GAMA turned a deaf ear. When they were polled on participation in a joint program, in May of last year, they voted it down, 86 to 54. Even more indicative of their attitude than this three-to-two majority against, however, was the fact that only 140 out of 311 even voted! Thus, it seems safe to assume that only 54 out of 311, or less than 1 out of 5, favored participation.

This did not rule out the possibility of their carying on unilaterally, of course. Maybe some wanted to go it alone. But it's safer to bet that most of them have decided to join the electric forces, rather than try to lick 'em.

Take Lennox Industries, for example. Lennox is a giant in the gas heating field. Speaking before convention of the National Warm Air Heating and Air Conditioning Association, President John Norris of Lennox said: "Just as soon as we as a warm air industry have something (equipment) available (for ducted air heating), we are going to get full and enthusiastic cooperation from the entire electric utilities industry. They need us—more than many electric utilities yet realize."

"Construction Review" notes that manufacturers are crawling on the bandwagon in growing numbers: "Of the manufacturers contacted in the (heating equipment) survey, 13 stated they did not manufacture electric heating equipment in 1959 but that production was contemplated in 1960 or soon thereafter. There is every indication that the use of electricity as a fuel for all types of space heating is receiving careful attention from the entire heating equipment industry."[4]

Incidentally, in the GAMA balloting, the furnace division voted 3 to 1 against participation. The conversion burner manufacturers were 2½ to 1 opposed. The direct heating equipment and wall and floor furnace divisions were about evenly divided. Only the boiler makers favored it.

WHAT IS ELECTRIC HEAT?

THERE ARE NUMEROUS TYPES OF ELECTRIC HEATING EQUIPMENT in use today. Perhaps the most heavily publicized is the heat pump, which of course is a year-around air conditioner rather than strictly a heating unit. It is also over-rated as an immediate threat to the gas heating load, judging from the small number of units in use.

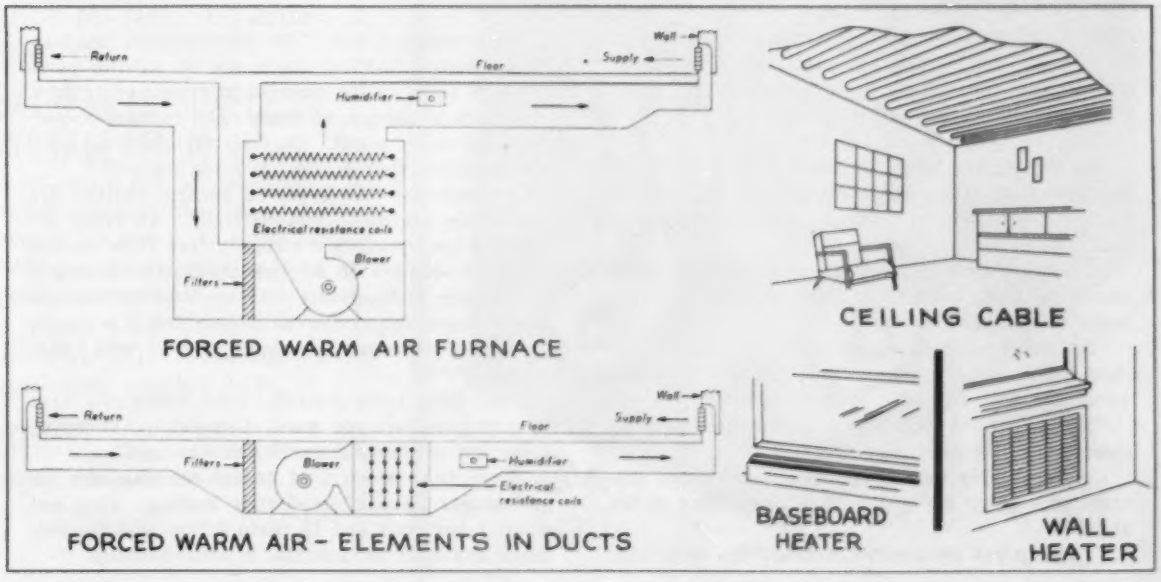
The most numerous category of equipment, by far, is convector-type radiation and baseboard radiation, lumped together. Between them, these systems accounted for 66 per cent of all shipments, in dollar volume, in 1959.

Unit heaters and unit ventilators accounted for 20.3 per cent. These are used primarily in industrial and commercial installations, including schools —demonstrating that the threat is by no means limited to the domestic load.

Other types of systems include cables, embedded in ceilings and floors, which accounted for 5.6 per cent of the dollar shipments; glass panels, both the radiant and baseboard types, 7.5 per cent; and warm air furnaces, central, floor, and wall, 1.3 per cent.[4]

They may be classified another way:

1. Direct electric resistance units, which include baseboards, wall panels, unit heaters, ceiling cable, and miscellaneous types.
2. Systems involving air handling, which include:



a. Warm air furnaces, using electric resistance units in place of the conventional gas units.
b. Electric resistance heating elements inserted in ducts. This type of installation is adaptable to central summer air conditioning, humidification and dehumidification, air circulation, and air cleaning.
c. Warm air baseboard diffusers with electric resistance units built right in.
d. And, of course, heat pumps.

THESE ARE ITS ALLEGED ADVANTAGES

TO HEAR ELECTRIC HEAT'S PROPONENTS TALK, you'd never know that this prodigy was born of desperation and mothered by the utilities' need for a load balancer. Suitably brainwashed, you'd conclude it was the answer to the home owner's needs, not the utilities.'

The industry has succeeded in taking one or two rather dubious advantages and transforming them into a whole spectrum of alleged advantages. It's even taken two serious disadvantages and dressed them up to look like advantages. Finally, it has done a wondrous job of transposing cause and effect in this masterpiece of tortured logic:

"(With electric heat) your home's better insulated!"

If you haven't already encountered them from your electric competition, here are the chief claims you can expect to hear as the electric heat drive gains momentum:

Efficiency—"All electricity consumed is converted into usable heat, not lost in pipes, ducts, and basements."[6]

Safety—"No flames, no odors, no danger of burns or injuries."[6]

"It just isn't possible to have a burst pipe or open joint. There is no combustion in an electric home."[3]

"Safe, simple, durable, fool-proof."[7]

"Electric heat is safe. There's no pilot to light or to go out; nothing to escape, leak, drip, or boil over." Commonwealth Edison, Chicago: "Since there is no flame, there is less risk of fire, no danger from pilot light failure, no possibility of accumulating combustible or noxious gases."[8]

Modernity—"Electricity is modern."[7]

Cleanliness—"Clean."

No fire, fumes, soot, or ashes. Only slight air movement keeps housecleaning chores to minimum, adds years of life to rugs, drapes, curtains, walls and ceiling paint or paper."[6]

"It's as clean as electric light. Electric heat burns no fuel, creates no dirt to soil draperies, walls or ceilings."

"An electric heating unit gives off no soot, no dust. The non-ducted systems do not circulate household dust from one room to another."[8]

"No burners or chimney to need replacement or cleaning." "No dirty air filters to change."

Comfort—"No drafts or cold spots. Heat distributed evenly. No cold walls. Like sitting in the sun."[6]

"You can put electricity anywhere you want and, therefore, you can have electric heat on or off wherever and whenever you want it."[3]

"Electrical heating provides closely regulated, even heat. With ceiling cable and other radiation equipment, comfort can be obtained at lower thermometer readings than with other types of heating. With baseboard installations, heat sources can be distributed around the perimeter of a room to counteract drafts from cold windows and walls. Ducted electric furnaces offer all the advantages of forced warm air heating and make ideal companions for central air conditioning systems."[8]

Compactness—"The units are small and can be built into baseboard, ceiling, floor, or wall. The space ordinarily allotted to a furnace can be put to some other use."[8]

"There's no furnace to worry about with flameless electric heating."

Silence—"No noisy radiators or furnaces."[6]

"With electric heating, there are no moving parts to . . . rattle you out of your sleep."

Installation Cost: "Costs less to install."

Says Ayers of Commonwealth Edison: "Electric heat has proven to be very good for apartments. Seventy-four per cent of our electric heat customers in Chicago live in multi-family units. The apartment house builder saves a substantial amount on the first cost of the—no chimneys, flues and ducts, boiler rooms, fuel storage facilities and piping. On one project, the builder saved $2300 per unit."[3]

Maintenance Costs—"No maintenance, no fuss. With electric heating, there are no moving parts to wear out . . . No burners to repair or replace. No filters to change, no cleaning or furnace inspections to worry about. Once electric heating units are installed, your heating worries are over."

Convenience—"All types of electric heating are completely controlled automatically. All types except the heat pump are virtually free from service needs. There are no worries about maintaining a fuel supply. Independent room-by-room controls are easy to incorporate into the system, and it is simple to heat spaces sometimes hard to heat with other systems."[8]

"Individual room controls. Heat where you want it at temperature you want. Completely automatic. Basement available for additional rooms."

There, in a selection of quoted remarks, are the advantages claimed for electric heating. They are about 1 part fact and 10 parts fiction, and the evidence available for rebuttal is overwhelming.

NEW FROM bryant

SUPER COMPACT 2-TON AIR CONDITIONER
PRICED FOR TRACT HOMES AND APARTMENTS

This new Model 557 represents the essence of Bryant's long years of research and successful experience in central air conditioning. Along with its companion Model 563, it puts you in a prime position to bid and get these close margin jobs at a profit.

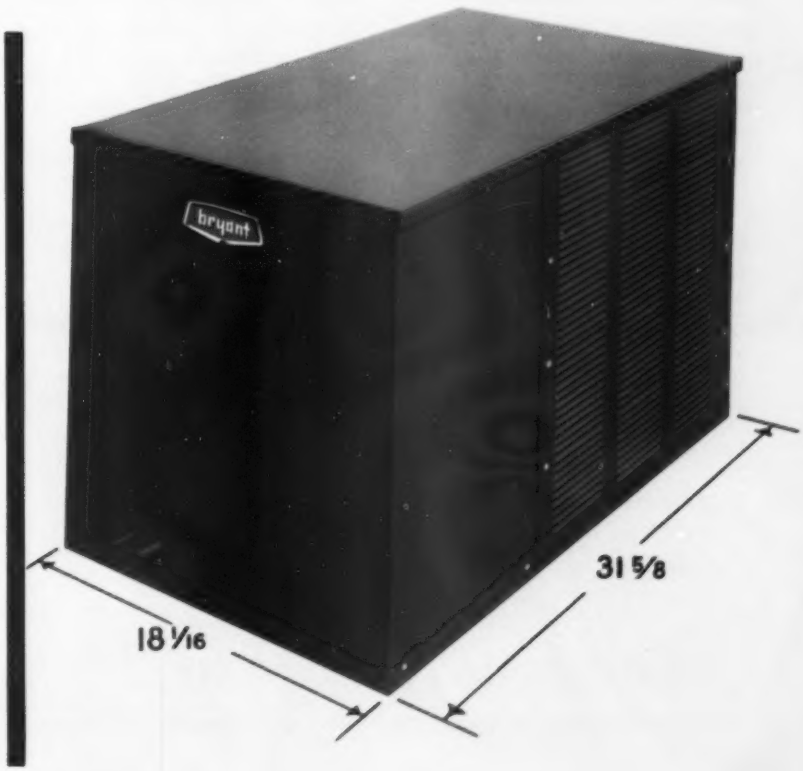
AIR CONDITIONS up to 1200 square feet of living space.

EASY TO HANDLE on the truck, on the job.

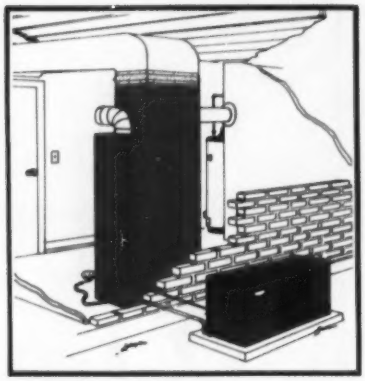
EXTREMELY SIMPLE INSTALLATION All you do is uncoil the 8 feet of permanently attached tubing, set the units in place and connect the wiring. Running, cutting, soldering of refrigeration lines, and purging is eliminated.

MODEL 557 comes with 8 feet of permanently attached tubing.

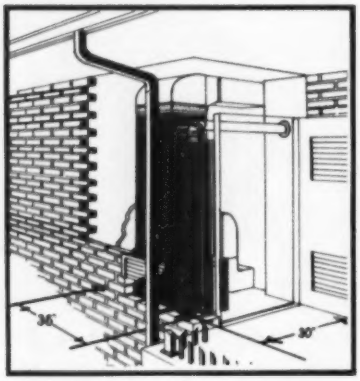
MODEL 563 is the same unit without tubing attached.



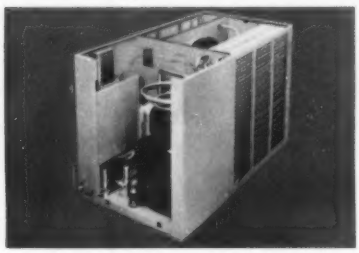
NEW SPACE-LABOR-MONEY SAVING DESIGN



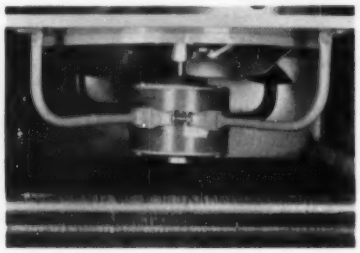
FOR HOMES AND GARDEN APARTMENTS. This view shows how unit can be *placed within 4 inches of outside wall* with no sacrifice of operating efficiency. Extended tubing permits fast, foolproof installation.



FOR APARTMENTS. This view shows condenser, furnace, cooling coil and ducting housed in an outside closet only 30″ x 36″. Note how condensate drains directly into downspout.



QUIET OPERATION. Compressor is housed in sound-proof compartment for quiet operation, and large condensing surfaces permit lower, quieter fan speeds while maintaining full rated cooling capacity.



EFFICIENCY INCREASED. Placing motor between the fan and the coil sets up a swirling action of the air that "scrubs" the coil surfaces increasing heat transfer efficiency. Also, the motor is better protected.

2 TO 7½-TON UNITS TO FIT YOUR NEEDS. You can make up some sixty different combinations of Bryant condensers and coils to meet almost any conceivable need. See our new catalog.

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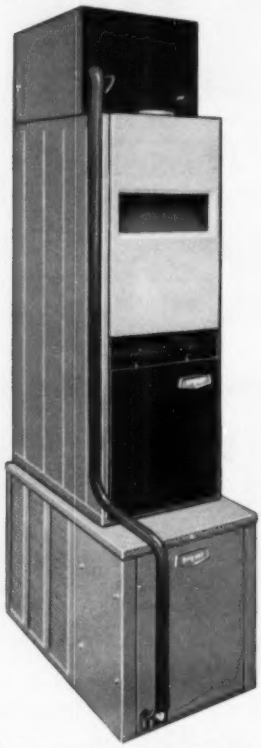
the company on the move!!!!!

BRYANT MANUFACTURING COMPANY • Indianapolis 7, Indiana

SOLID LOCAL SUPPORT in layout, sizing and supervision of jobs by factory trained air conditioning specialists is available through your local Bryant Distributor or Factory Branch.



COMPLETE HOME COMFORT CORE The cooling coil, condensing unit and 80,000 Btu furnace are combined in a compact yet easy to service package. In stack-on installation, furnace opening is provided in condenser cover.

USE BRYANT'S Home Comfort Core Merchandising Plan (all ready to use) to get the inside track on and close those tough jobs. Your Bryant Distributor or Factory Branch has all the facts.

12 REASONS WHY DEALERS LIKE BRYANT

1. Most Complete Line. 2. Exclusive selling features. 3. Fast Delivery. 4. Most flexible financing and credit aid. 5. On-the-spot counsel. 6. Sales and technical training. 7. Business management guidance. 8. Local ad campaigns. 9. Sound sales policies. 10. National reputation. 11. Gas air conditioning. 12. Bryant's financial strength.

ARE THEY FACT OR FICTION?

LET'S EXAMINE THESE CLAIMS, bathing them in the direct glare of fact. First,

Efficiency. Let's give the devil his due. Authorities concede (since they have no direct proof to the contrary) that electric heating is 100 per cent efficient, while gas, which is next among the fuels, is anywhere from 75 to 85 per cent efficient.

However, all this means is that in comparing costs of fuel, you must take these efficiencies into consideration. If electricity costs 2 cents per kwh, one penny buys 1706 Btu (half of the total heating value of one kwh). If LPG costs 15 cents a gallon, and we figure each gallon has 92,000 Btu, does one penny buy 1/15th of that heating value or 6133 Btu? It does not—it buys only somewhere between 4600 and 5123 Btu—between 75 and 85 per cent, depending upon whether you accept 75 per cent or 85 per cent as its efficiency rating.

But as you will note, even at the lower estimates, gas would buy a lot more Btu than electricity, at these prices. So efficiency doesn't mean a thing, unless it's figured against price.

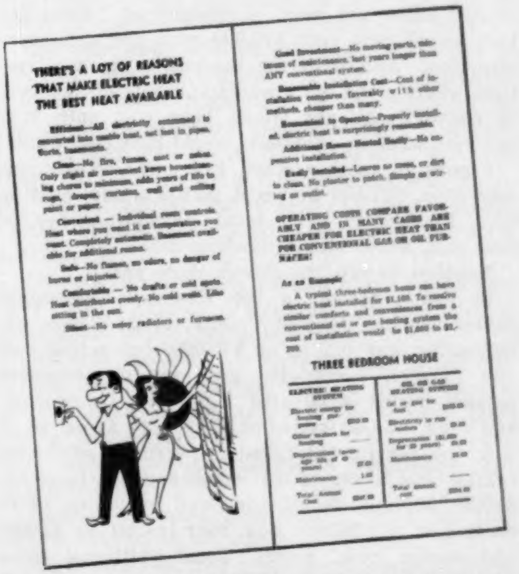
Besides, electric heat proponents go too far when they say that "all electricity is converted into usable heat, not lost in pipes, ducts, and basements." They are talking about direct radiant heat, not central heating. Central electric heating *does* use ducts, and the heat source *may* be located in the basement. The efficiency claim, then, is ridiculous and meaningless.

And note. As we shall see later, many of electricity's phony claims are not truthfully fuel vs. fuel claims. They are heating system vs. heating system "advantages." The same "advantages" claimed for direct electric heat over central gas heat are true of direct gas heat over central gas—or electric—heat.

Safety. Here we go again! If gas is not the most maligned fuel in the world, it will do until something more put upon comes along. The various forms of competition have succeeded in making gas look like the most dangerous fuel when actually the record shows it is the safest. Year after year, building fire losses from electricity totaled four or five times as much as those caused by gas. This is provable.

It's a matter of the impression in the public's mind. People remember the horror of the Schuylkill (Pa.) explosion of a couple of years ago. How many have remarked that the aircraft carrier fire last January, which cost many lives, was caused by diesel fuel? Or how many can remember all the fatal fires caused by gasoline? How many were impressed by the fact that a recent airplane crash in Los Angeles was rendered fatal before the plane hit the ground because it first hit high tension wires and exploded in midair? How many recall the air crashes that have been due to defective wiring?

All fuels must contain energy. Uncontrollably released, this energy, in whatever form, can be dangerous. Control makes the difference. LPG is



The mailing piece (left) circulated by Sioux Valley and the Commonwealth Edison ad (right) demonstrate the intensive efforts being made by the kilowatters. The ad stresses "no furnace" but in a postcript it pitches the heat pump, which has all the alleged "disadvantages" of a furnace—and more!

fairly easily controlled—more so than electricity.

Furthermore, dealers who are faced with the unsafe phantom might do well to remind prospects of the recent fatal atomic reactor explosion in Idaho. Electric utilities proudly proclaim that atomic fuel is the fuel of tomorrow. But how safe will it be?

But let's listen to what the kilowatters themselves say:

Fred Kreiser, Chairman of the National Electrical Manufacturers Association, in hailing the acceptance by the industry of a new equipment standard,[3] said: "The standards should—

"1. Upgrade the quality of equipment used.

"2. Arrest the so-called wattage race—the ridiculous and suicidal race to sell the most heat for the least dollars by passing as much heat as possible into as short an enclosure as possible with the fewest wires to connect.

"3. Prevent adverse customer reaction to:

a. Wall streaking and discoloration of draperies.

b. Smoke and fumes from "too-hot" equipment.

c. *Fires.*"

Would we be unfair if we inferred from these remarks that electric heat installations *can* cause fires, smoke, fumes, as well as wall streaking and discoloration if not built to rigorous quality standards?

And, where is any inherent advantage for electricity in this situation?

"Independent room-by-room controls" are as easily obtained with gas as with electricity—if anyone wants it that way.

Costs less to install. In many cases, this claim is true—IF you omit the cost of insulation.

When Mr. Ayres claimed a builder saved $2300 per apartment, presumably he was comparing electric heat costs with coal or oil, not natural gas. These apartments could have used direct gas heating equipment, also saving a considerable portion of that $2300.

Peoples Gas, Chicago, refutes the claim of lower first cost with these comparative figures for an "average" three-bedroom house with 1000 to 1100 square ft. of floor area and a full basement:

Electric resistance heating (baseboard)	$895
Gas forced warm air	610
Gas hot water boiler	910

Included are the equipment and the distribution system, but not installation.

AGA-sponsored studies[5] offer some additional evidence on costs. Two schools in Angola, a suburb of Buffalo, N. Y., one with electricity (Hoag), the other with gas (Highland) were compared. Installation of just the electric heating equipment at Hoag ran $118,205.04 as against $138,790 for gas. However, with electric heat, added insulation costing $19,040 and ventilation, $7646, were necessary. The total cost for electricity then (allowing a $600 credit for the meter house) was $145,291.04, or $6501.04 *more* than gas.

It's interesting to note that even this extra insulation failed to keep operating costs of the electrically heated school in line with gas costs at Highland. At Hoag, on an electric rate of 1.64 cents, the annual bill was $6140.06. At Highland, total cost-including auxiliaries—with a gas rate of 74.6 cents per Mcf ran $3008.40.

In comparing costs, it is sometimes overlooked that additional costs can be hidden in the construction bill whereas gas costs are usually shown as a separate item.[11]

In areas where with gas, no storm doors, double windows, or other insulating devices are conventionally used, electric utilities still recommend them if the homeowner is going to install electric heat. In such situations, they can add as much as $1000 to the building costs.[11]

Here are a couple of case histories[12] which cast further doubts on these claims of low initial cost:

At the First Methodist Church in Belleville, Mich., bids were submitted for both gas and electricity. A gas-fired heating system was put in at $27,500, electricity at $20,000. But, with electricity, extra insulation was urged. This included the padding of floors, walls, and ceiling, double glass, storm doors, etc. Since the double glass windows would have fixed sash, mechanical ventilation—either unit ventilators or central fan systems—would have been required. Both are expensive. Total additional cost of insulation: $20,000. Grand total, $40,000.

Again, even with insulation, electricity came out an expensive second best on estimated operating costs. With conventional insulation, gas at 78 cents per Mcf (approximately 1 million Btu) was figured to cost $2100 per year. Electricity at 2 cents per kwh would have cost $10,500 with the same construction. And with the thermos-bottle construction, wherein the costs would run only 40 per cent of conventional, gas would have cost only $840 per year whereas electricity would have cost $4200!

Figure it another way: gas *with conventional insulation*, $27,500 first cost, $2100 annual heating bill. Electricity, *with heavy insulation*, $40,000 first cost, $4200 annual heating bill.

Needless to say, the church chose gas.

So did a school in the Kearsley Community School system, Genesee County, Mich. There gas hot water was bid in at $40,000, but actual cost was $35,000. Electricity, even put on secondary service, which eliminates a $10,000 transformer and vault, was estimated at $25,000, or $1 per sq. ft But, the electric bid called for 4 in. of *additional* ceiling insulation at 20 cents per sq. ft—total, $5000; 5000 sq. ft. of 4-in. wall insulation at 60 cents a sq. ft., $3000; 2-in. floor insulation, $1000; and double glass, $5000. Total additional costs, $14,000. Grand total, $39,000.

In the light of these facts, how well do electricity's claims stand up? No one, certainly, could be very greatly impressed if he knew the facts. Unfortunately, the layman doesn't—and won't until

you tell him.

The fuel—any fuel—is no better than the equipment in which it is utilized.

Modernity. What is "modern"? Electricity is so expensive to use that the utilities recommend heat be turned down in rooms that are not in constant use. They are, in effect, reversing the trend of progress and recommending to the public that it revert to the days of the Franklin stove.[10]

Cleanliness. Well, we've already seen one evidence of the kilowatters' admission that electricity *can* mess up a house.

Heat, from no matter what source, rises. Electric heat manufacturers cannot repeal this physical law. As it does, it carries with it the dust of the air. This dust must settle somewhere. It's about as simple as that.

Direct heating equipment, involving no "air handling," does not, we imagine, "move the dust about from one room to another." This is as true of gas as of electric units. So again, the electric interests are trying to claim for a fuel an "advantage" that is in the system instead.

However, even direct electric heat creates dirt, as Mr. Kreiser admits. Lint and dust particles[10] are heated and carbonized by the hot surface of the electric wall heater and deposited on the wall above the unit.

The kilowatters have also used this claim of "no dust moved from one room to another" to "prove" that electricity is cleaner in apartments. But dirt is actually brought in from the outside, tracked on the carpets, and agitated by people walking on the rug itself.[9] The circulation of this dirt has no direct connection with the circulation of heat.

The claim that with electric heat "there are no dirty air filters to change" is possibly the most ridiculous—well, that's open to argument—of all electric heat's ridiculous claims. Filters do not put in dirt; they take it out. The more dirt, dust, and pollen that collects on a filter, the cleaner will be the air circulating throughout the house. Homeowners should thank their lucky stars for "dirty air filters."

Comfort. Here again, electric heat's proponents have taken a satchel of disadvantages and tried to make them sound like advantages.

"No cold spots"? Air temperatures of 70 deg. or less are not uncommon with a radiation system.[10] Areas or objects which are shielded from the radiant surface will be cold. There is a complete lack of air circulation, of ventilation, and humidity control.

"Closely regulated, even heat"? "You can have electric heat on or off whenever you want it"?

The kilowatters took a tremendous disadvantage —high heating cost—and did something about it. They hung a thermostat in every room, so the whole house need not be heated at one time. With electric heat, you can keep your bedrooms at 40 deg. during the daytime, if you so desire. You're not in them very much anyway. If you have need to go in, you can always wear a sweater or topcoat. If you want to go in to change clothes, you can always turn the heat up a few minutes ahead of time.

They speak of no heat "lost" in the basement. Most people like some heat in the basement, if they use it at all.

The multiplicity of thermostats needed to keep one's bill from skyrocketing is a decided disadvantage. For one thing,[5] installing them on the wall is extra costly, so frequently they are located on the floor units. This may be beneficial to the housewife's waistline, but it is not convenient. Also, at this low level they permit large temperature buildups during the day from solar heat. Floor temperatures at the thermostats remain about 68 deg. At the occupant level, however, they hit above 80 deg. at mid-day.

Furthermore, since the heat source is located on an outside wall, and the thermostat therefore is also on an outside wall, it is affected by outside temperatures. The 110-volt thermostat used in electric heating installations has a wider differential between the on-and-off operations than the low voltage thermostat used on gas installations. The latter is a refined device with a built-in heat anticipator which narrows the operating differential.[9]

Compactness. Here's another case of confusing system with fuel. Direct gas heating systems do not require a space-consuming furnace any more than do electric heating systems.

Silence. Once again, the electric heat people are deliberating confusing fuels and systems. Most of the noise in a central gas system comes from the blowers. Central electric systems also require blowers. Heat pumps *do* have moving parts which can set up a fine racket. And the cracking sounds associated with heat-up and cool-down are caused by expansion and contraction of the metals in the unit. How electricity could prevent these noises is unexplained.

Maintenance costs. The confusion between fuels and systems is infinite. When Commonwealth Edison says that "with electric heating, there are no moving parts to wear out," it is conveniently overlooking the heat pump, which in other advertisements it pushes. "No filters to change"? Well, that depends on the heating system.

Furthermore, as Peoples Gas retorts, "In a small apartment with five electric baseboard heaters there are five 110-volt thermostats. This type of thermostat would have a shorter life than the one low-voltage thermostat required with a gas boiler or furnace.

"With a gas boiler or furnace, the equipment should be checked every three to five years. (We) will render this service for a nominal charge.[9]

Convenience. "All types" of gas equipment can also be controlled automatically. Most are free of "service needs." And as for "no worries about

maintaining a fuel supply," any one who has lived through a crippling storm that cut off the electrical supply for anywhere from minutes to days would no doubt feel more secure depending upon keeping sufficient LPG on hand than upon non-storable electricity.

THE CLEAR-CUT ADVANTAGES OF GAS

SO FAR, OUR STORY IS ONLY HALF COMPLETED. We've shown the facts that refute the alleged advantages of electric heat. Now let's talk about the *real* advantages of gas.

Safety: Year in and year out, gas has proved to be the safest fuel. The annual statistics bear this out. It always beats out electricity, sometimes by as much as 5 to 1.

Convenience: There is nothing more convenient than an automatic gas heating system. With night setback, the thermostat need never be touched.

Cost: Gas is competitive in first cost; the exact relationship is dependent upon the system used. Considering the cost of insulation, it is usually a great deal cheaper.

With the rates that prevail throughout most of the country, gas also enjoys much lower operating costs.

Comfort: Nearly a half century of extensive scientific research has been conducted to determine the conditions of the air that produce indoor comfort under typical living conditions and under all seasonal changes.[10] A comfortable indoor atmosphere may be achieved when:

1. Air is at a satisfactory temperature.
2. Air contains the proper amount of water vapor.
3. Air is moving constantly and perceptibly.
4. Air is free of dust, dirt, smoke, and pollen.
5. Air is free of staleness.
6. Air is free of germs and bacteria.
7. Air is free of adequate density.

In other words, temperature alone is not enough.

With gas, however, temperature is completely controllable, and can be maintained uniformly throughout the entire house.

With a gas system, air does move constantly and perceptibly.

All of the air circulating through a forced warm air heating system is filtered. Dust, pollen, and lint are removed.

There is no stale air with a gas system: positive ventilation with just the right amount of outdoor air is normal with a quality forced warm air system.

Let's look at insulation:

Proper insulation has become a standard part of residential construction. In moderate amounts, it cuts heat loss significantly.

Take an "average" one-story, three-bedroom home of approximately 1200 sq ft. Put 4 in. of insulation over the ceiling and it cuts heat loss by nearly 36 per cent. Add 2 in. of insulation in the outside walls, and you have reduced the loss another 7 per cent. You have now saved 43 per cent of heat loss.

It is obvious that you now are faced with a diminishing rate of return. But with electric heat, until recently the industry has pushed for a 6-in. (not 4-in.) insulation in the ceiling, 4 in. (not 2) in the sidewalls, and 2 in. under the floor, plus vapor barriers. Basement walls are furred and insulated in homes with unheated basements (with electric heat, you can't afford to heat the basement). Windows and doors are weatherstripped, and storm sashes and storm doors are used.

Your home is now thermos bottle tight. Odors of tobacco smoke and cooking will be with you a day later. Excess humidity from baths or cooking is sealed inside.

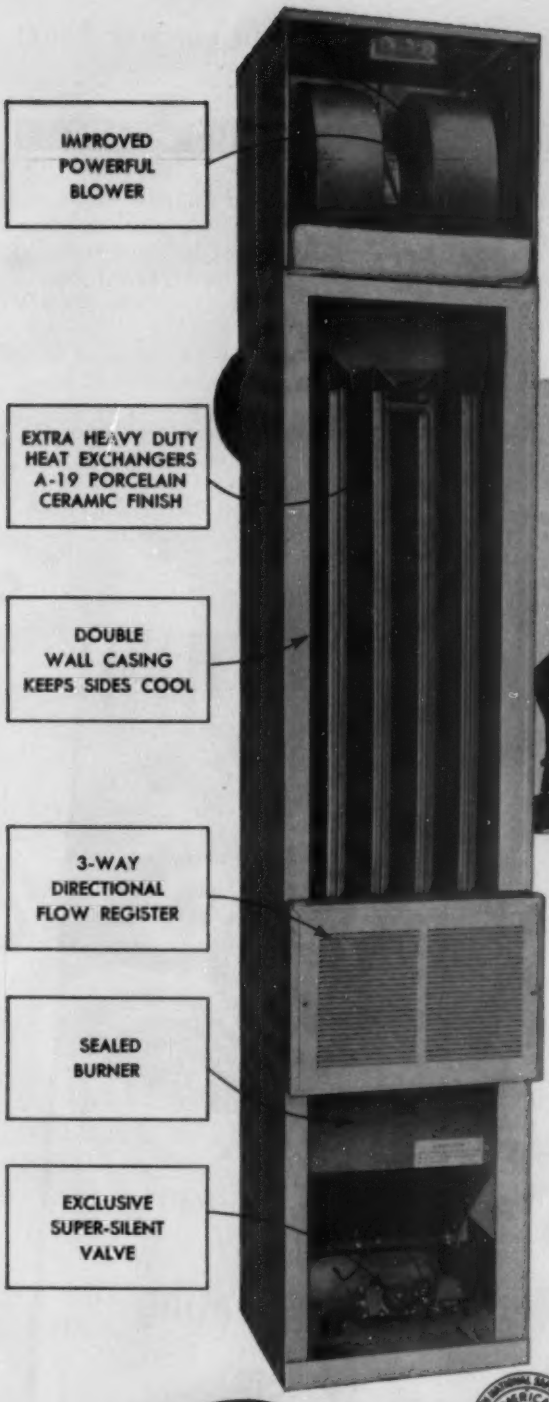
Even thermos-bottle construction is no guarantee against high heating costs. Not long ago, the National Warm Air Heating Air Conditioning Association investigated some high operating cost complaints in electrically heated homes. The faults were two: improperly or ineffectively placed insulation and excessive moisture.

With all their insulation, some had forgotten to insulate the floors of rooms above attached garages, the duct work located in garages or attached unheated areas, and along the perimeters. "A spot often missed in crawl space construction," says NWAHACA, "is insulating the joist ends above the foundation wall, just beneath the subfloor. This can be quite a source of heat loss."

The "6-4-2" formula is no guarantee of proper insulation. You have the word of the electric industry itself on this. Says "House & Home" magazine: "(The) 6-4-2 standard made no allowance for the differing K-factors of different types of insulation (glass, fiber, mineral wool, balsam wool, foamed plastic, reflective, etc.), so many manufacturers would not support it. For some climates it required too much insulation; *for most climates it required too little.*"

The industry has since been working on a "performance standard" that will base insulation requirements on allowable heat loss, and allowable heat loss will vary by geographical location.

The gas industry, then, can claim these four advantages without fear of their validity: safety, convenience, lower cost, and comfort. It can also claim *true* modernity. And it can rest assured that its product is at least a match for electricity in the matter of cleanliness. It gives ground to electricity on only one point—efficiency; and this, as we have seen, is meaningless unless it is related to rates.



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PACESETTERS IN QUALITY, COMFORT AND ECONOMY

WHAT CAN BE DONE ABOUT THE THREAT OF ELECTRIC HEAT?

ANY MERCHANDISING EFFORT HAS TWO LOCALES—the national (or, in some cases regional) and the local, or grass roots.

At the present time, the only national effort that is being made is by the American Gas Association. GAMA is not participating, although it is carrying on its own publicity and public relations programs against electricity. With the rush of the manufacturers to climb on electricity's bandwagon, it is doubtful that much help can be expected from that quarter in the future.

The National L. P. Gas Council has no specific plans for combating electric heat at this time. It *has* been fighting electricity, and last year it produced the very popular mailing piece, "Confessions of a Twice-Fooled Wife." A portion of it was devoted to electric heat, but other domestic appliances were played up as well.

That's about the extent of the national effort, as it stands today. We can look forward to increased activity by the AGA. The Council might take action in the future—will, if its members feel the threat is sufficiently serious. But as of today, it does not have the members—thus, the money—needed to add an effective anti-heat campaign to the budget. It needs support, mainly from dealers themselves.

The second battleground, the local one, is where you must fight.

On the premise that you need arms for the battle, BPN has prepared a mailing piece especially aimed at electric heating. This piece is designed for mailing to your customers and prospects—whoever is considering the use of electricity in place of gas. It should be particularly effective with architects, builders, governing boards of institutions, and homeowners who appear to be falling for the "total electric living" line.

Locally, you can develop some allies. First, other dealers: There's nothing wrong with a little cooperative promotional effort. Second, your utilities. If you recognize electric heat as a threat, you can bet they do. Here is a natural rallying point for Gas Unity.

Finally, don't overlook your local heating contractor, even if you have before. Whether you compete with him or cooperate with him, in the matter of electric heat your interests are almost identical.

Consider his position: Normally he doesn't care whose fuel he sells. But the upsurge of gas in the heating markets over the past 15 years has put most contractors in the gas business. Will he flop to electricity in the same way tomorrow?

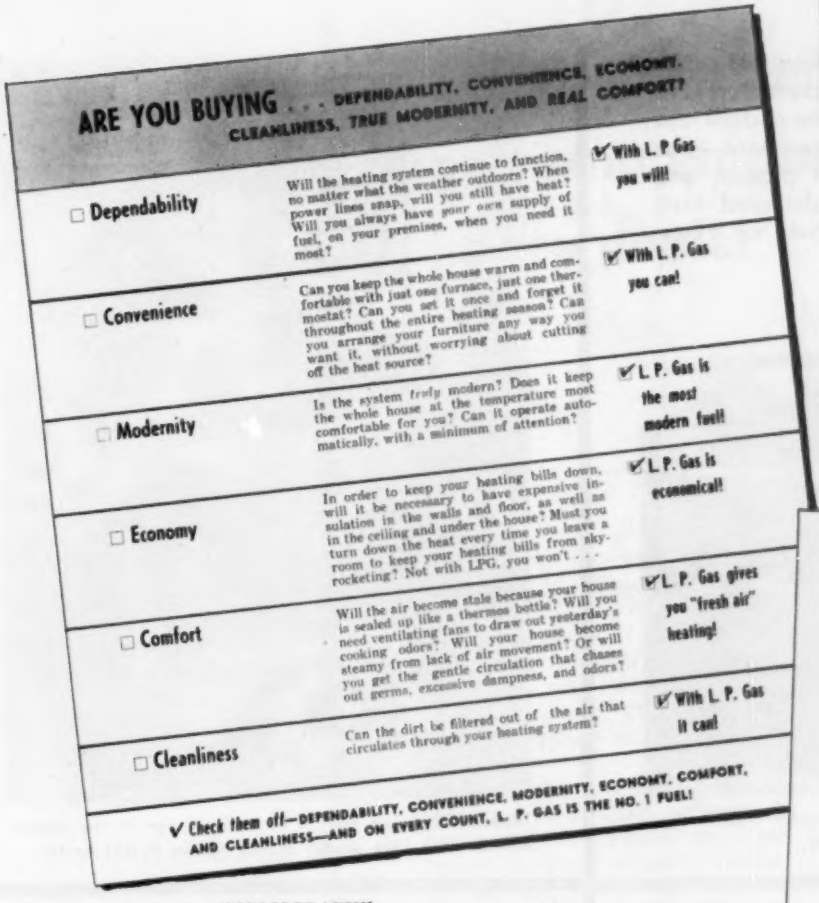
At this point, it looks very dubious. The electrical contractor is the lad who is getting the electric heat business. It's natural because, for one thing, he is able to increase his normal profit by adding electric heating, plus the larger entrance panel. He is also, in many cases, receiving free engineering and direct sales support from the electricity utility.

The heating contractor is a specialist in air ducts, grilles, venting, piping, and the engineering of air handling systems. But direct radiant heat requires neither his equipment nor his skills. It's a straight wiring job.

The result is that in 1959, 58 per cent of all electric heating was installed by electricians, 12 per cent by electric heat specialists, 9 per cent by electric wholesalers, 6 per cent by electric utilities, 6 per cent by "others", and only 9 per cent by regular heating contractors.[10]

Today he is being bypassed by electric heat. He should be more than willing to cooperate in a gas heat drive. ■

Here's how to tell your customers



Need a mailing piece to combat electric heat?

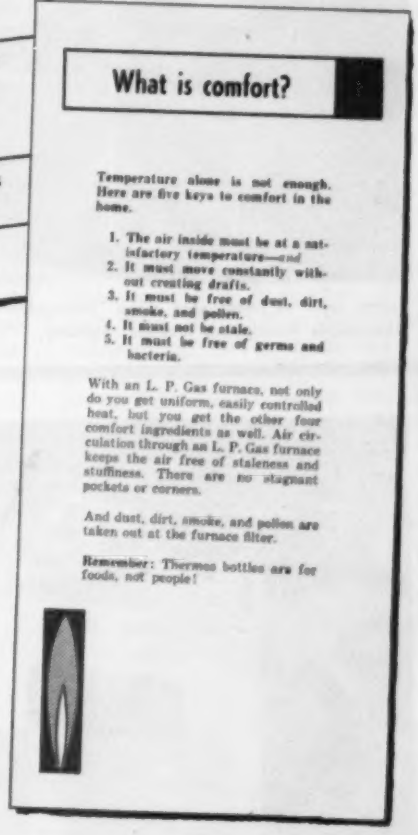
Illustrated here is a 4-page mailing piece, measuring 8½ x 4 in. when folded, designed by BPN especially for use in those areas where electric heat is becoming a threat. Minimum order, 500.

Prices, plain:

500-1000	2¾¢ each
1000-1500	2½¢ each
1500-2000	2¼¢ each
2000-2500	2¢ each
2500 and over	1¾¢ each

Prices, imprinted with dealer name and address (4 lines maximum):

500-1000	5½¢ each
1000-1500	4¢ each
1500-2000	3½¢ each
2000-2500	2¾¢ each
2500 and over	2½¢ each



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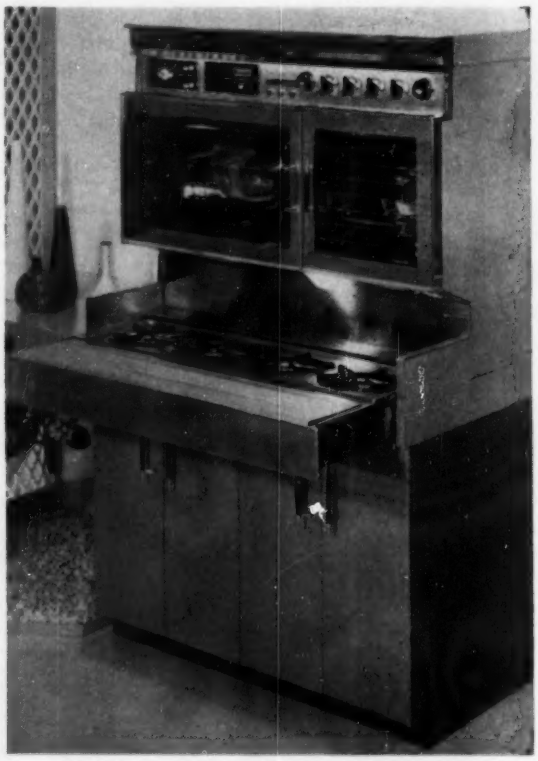
A reprint of this article can be obtained by writing on company letterhead to the Editor, BUTANE-PROPANE *News*, 198 S. Alvarado St., Los Angeles 57, Cal.

Will these glamorous new ranges (and others like them)

New hope for the free-standing gas range is seen in the scramble of manufacturers to introduce models that bear the custom look of the built-in. The four shown here—plus Roper's—are now ready for market, and other manufacturers have declared they will soon have entries in the race for a new kind of market.

Sunray calls its Deco/range series "built-instant" gas ranges. Changeable front panels simulate cabinetry.



Tappan's "Fabulous 400" is of similar design to the electric models, which have already proved popular in that market.

Brown's Simplicity Series was recently unveiled, will be ready for second-quarter delivery. Note surface controls.

Caloric claims its "Compacto 30" will save $121.50 in installation costs compared with conventional built-ins.

be the answer to competition from builders?

New ranges with a "built-in" look may shift merchandising emphasis back to the appliance dealer

WILLIAM T. HARPER • Eastern Editor

A BPN Exclusive

A FREE-STANDING GAS RANGE WITH THE BUILT-IN LOOK may be the means to get the L. P. gas dealer back into the range market. This is the most important fact to arise from a BUTANE-PROPANE *News* survey of some of the leading range manufacturers, just completed.

The fact that the dealer in free-standing ranges has suffered mightily through sales lost to the built-ins during the last six years is known only too well by those affected. When the built-ins first hit the market (1955 was the first year enough were sold for such a category to be included in Gas Appliance Manufacturers Association statistics), their acceptance by the public was immediate and impressive.

To say the new built-in sold like hotcakes would be an understatement, indeed. The first year of the GAMA statistics shows a total of 300,000 built-ins, both gas and electric. This figure almost doubled the following year and skyrocketed to over 1.1 million in 1959.

But, even as sales of built-ins zoomed, the ranges posed problems within themselves. How, manufacturers asked, are we going to sell replacements? The cabinetry was the principal part of the installation that would be replaced. This meant that range men would have to sell virtually an entire kitchen. What to do about it?

The manufacturers were not, of course, the only ones faced with built-in problems. The free-standing range dealers were really taking it on the chin. The GAMA figures show that gas built-in ranges accounted for only 4.3 per cent of total range sales in 1955. The 1960 figure has risen to an estimated 17.5 per cent.

On the electric side (which has a distinct bearing on the gas dealer), the figures are even more surprising. In 1955, GAMA statistics show that 12.5 per cent of all electric ranges sold were built-ins. In 1960, that figure had risen to more than 44 per cent.

What all this means, of course, is this: The combination LPG-appliance selling dealer has little chance of selling a built-in range. That market, with its major emphasis on new construction, is almost completely dominated by the house builders and contractors. Once again using GAMA figures, we see that in 1960, more than 29 per cent of all ranges sold in 1960 were built-ins—a market extremely hard for the L. P. gas dealer to crack.

One manufacturer believes the percentage is even higher than that. C. C. Wilson, merchandising manager for the Tappan Stove Co., estimates that "the free-standing range dealer has been cut out of about 40 per cent of his market" by built-ins.

This situation has more or less forced the LPG dealer to sell on price. In many instances, he has cut his markup to the bone. He could not satisfy the new homeowners' desires for the "built-in" look nor could he compete pricewise with a builder's volume purchases, so, he has had to be content

S. K. Wilson
Roper

George Mumma
Sunray

Victor Klein
Caloric

C. C. Wilson
Tappan

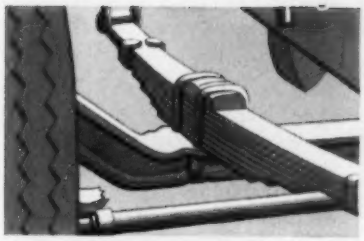
Save on your Fuel Oil and LP-Gas delivery costs with '61 FORD TRUCKS

NEW 262-CU. IN. "BIG SIX" FOR GREATER TWO-TON PERFORMANCE AND ECONOMY

America's savingest two-ton petroleum delivery trucks now offer a big 262-cu. in. Six with the power of big displacement, the gas economy of 6-cylinder design, plus the durability of heavy-duty construction. This engine features a sturdy stress-relieved head and block, strong forged steel crankshaft, long-lasting, stellite-faced intake and exhaust valves and durable, pyramid-type connecting rods. Ford's proven 292 V-8 and 292 Heavy Duty V-8—the V-8's with "six-like" economy—are also available for your special power requirements.

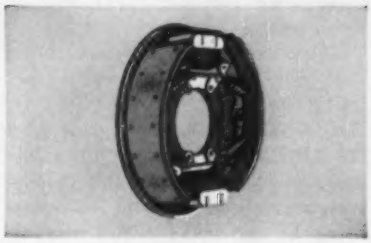
And you save with other new durability features like the more rugged frame, stronger radiator with new lock-seam construction, improved cab and chassis electrical wiring, plus longer, easier-riding and more durable rear springs. In certified tests by leading independent automotive experts the Ford F-600's improved rear brakes showed an increase of 39% in brake lining life.

You save more . . . because you can carry more every trip! Functional chassis construction provides maximum strength with minimum weight for top payloads. Ford's tilt-cab design distributes more weight to the set-back front axle to increase payloads by as much as 1,000 pounds. And parallel ladder-type frame with 34-inch width—standard on all Ford models—allows you to install special tank bodies easily and at less cost.



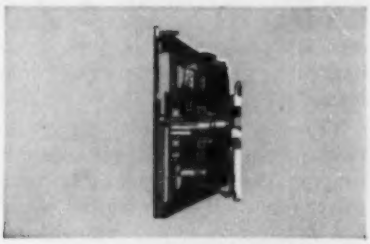
SAVE UP TO $250 ON FRONT TIRES

In certified tests of 2-ton trucks, Ford front tires lasted over twice as long! In 40,000 miles, this saving can add up to $250... more as mileage goes up! Ford's sturdy I-Beam axle and leaf-spring suspension also cut maintenance costs.



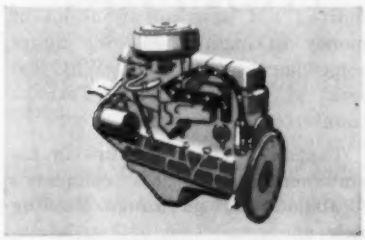
SAVE WITH 39% LONGER BRAKE LINING LIFE

The Ford F-600's improved rear brakes have a more positive retracting spring that completely disengages linings from drums for longer brake lining life. In certified tests rear brake linings lasted 39% longer.



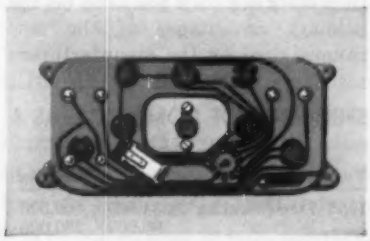
SAVE WITH HEAVY-DUTY 11½-INCH CLUTCH

A big HD 11½-inch clutch is now available with Ford's 292 and 292 HD V-8's for increased durability. Its large 140.8-square inch lining area dissipates heat faster for longer clutch life and greater dependability.



SAVE WITH POSITIVE CRANKCASE VENTILATION

Ford's Positive Crankcase Ventilation system cuts engine corrosion and oil contamination for greater engine durability and extended oil life. It's standard on the new 262-cu. in. "Big Six."



SAVE WITH PRINTED ELECTRICAL CIRCUITS

Ford's long-lived printed wiring circuit is standard on all Tilt Cab models. This system eliminates the "under dash" tangle of wires, minimizes shorts and provides for easy repair.

SAVE WITH TILT CAB ACCESSIBILITY

Ford C-Series cabs are quick and easy to tilt forward to expose the engine for inspection and service. With such complete engine accessibility—maintenance cost and downtime can be cut.

FORD TRUCKS COST LESS

YOUR FORD DEALER'S "CERTIFIED ECONOMY BOOK" PROVES IT FOR SURE...

FORD DIVISION, Ford Motor Company

with selling the "bottom of the line."

Now, new housing construction is expected to continue at a high rate despite the fact that it has levelled off somewhat from its peak. Government economists think housing starts in 1961 may rise to about 1.3 million units. Until recently, this might have not meant too much to the free-standing-range dealer. But today he has (or soon will have) a free-standing range that looks like a built-in with additional advantages to offer the new home buyer. More on this later.

There is more potentially good news from another government source. The Department of Commerce reports that the official figure for home repair and remodeling reached $19.3 billion in 1959. That figure is expected to go over $20 billion when the 1960 totals are accumulated. And, on the basis of past performance, the department expects that figure to increase at a constant rate in the years to come.

What does this mean to the L. P. gas dealer selling appliances? George E. Mumma chairman of the board of Sunray Stove Co. answers that question this way: "The major outlet for the LPG dealer who sells appliances will be to people who are interested in remodeling."

Does such a market exist in proportions large enough to make it attractive? Edward A. Norman, 1959-60 president of GAMA and presently one of its committee chairmen, emphatically feels that it does. He said, "Figures support our prediction . . . that 1960 would be the biggest year on record for home improvement. And evidently, the gas industry is enjoying a lion's share of this accelerated business."

This then gets us back to the original premise: that a free-standing gas range with the "built in" look may be the means of getting the combination LPG - appliance dealer back into the range market. Of course, he cannot sell such a range solely because it looks like a built - in. An automobile dealer could not sell a new-type car just because it happened to look like a Cadillac, for instance. If a buyer wanted a car that looked like a Cadillac, he would buy a Cadillac—unless, of course, he was buying on price alone and the look-alike cost much less.

These new ranges *do* cost much less. Says Sam. K. Wilson, advertising manager for the Geo. D. Roper Sales Corp., "We can give the LPG dealer a terrific price appeal—because this new unit is very competitively priced and it's something he can make a full markup on—and at the same time, he won't become involved with the problems of built-ins, such as installation, delivery and contractor's competition." Incidentally, most manufacturers speak in terms of a 40 per cent markup.

Ease of installation and elimination of these costs seem to be the primary advantages of the new ranges cited by the manufacturers interviewed. For instance, Caloric Appliance Corp., in its sales brochure on its Compacto 30, claims $121.50 can be saved on installation costs. It breaks down like this:

Electrical outlet	$7.50
Oven Cabinet	50.00
Range Cabinet	20.00
Range cabinet countertop	20.00
Counter-top cuttings	2.00
Range fastening	2.00
Two linear feet in kitchen	20.00
Total estimated savings	$121.50

Roper's Wilson is in agreement with the possibility of such savings. "The money saving angle is the thing we're plugging at," he reports. "You get everything in our *Charm* model that you get with a built-in but save an awful lot of money in installation. We figure somewhere around $100. Why just look at how much a Formica countertop alone costs."

Tappan's Wilson concurs in his statements about his company's "Fabulous 400" gas range. Needing only one connection, it can be installed in minutes, thereby saving labor costs. Regarding other installation costs, he says, "Many times these come up to or nearly equal the cost of equipment. With the '400' we can save that."

Sunray's Mumma has a specific example of savings realized through the installation of one of their "decoRanges." A customer living on a farm wanted to remodel her kitchen to give it the "built-in" look. A builder gave her an estimate of $1700 for the job. "With two 24-in. base cabinets and one 30-in. 'decoRange,' she got the complete built-in look for a total retail cost of around $450."

This new type gas range has other appeals, too. For example, most manufacturers are making

TOTAL DOMESTIC GAS & ELECTRIC RANGES SOLD AND PERCENTAGES OF BUILT-INS

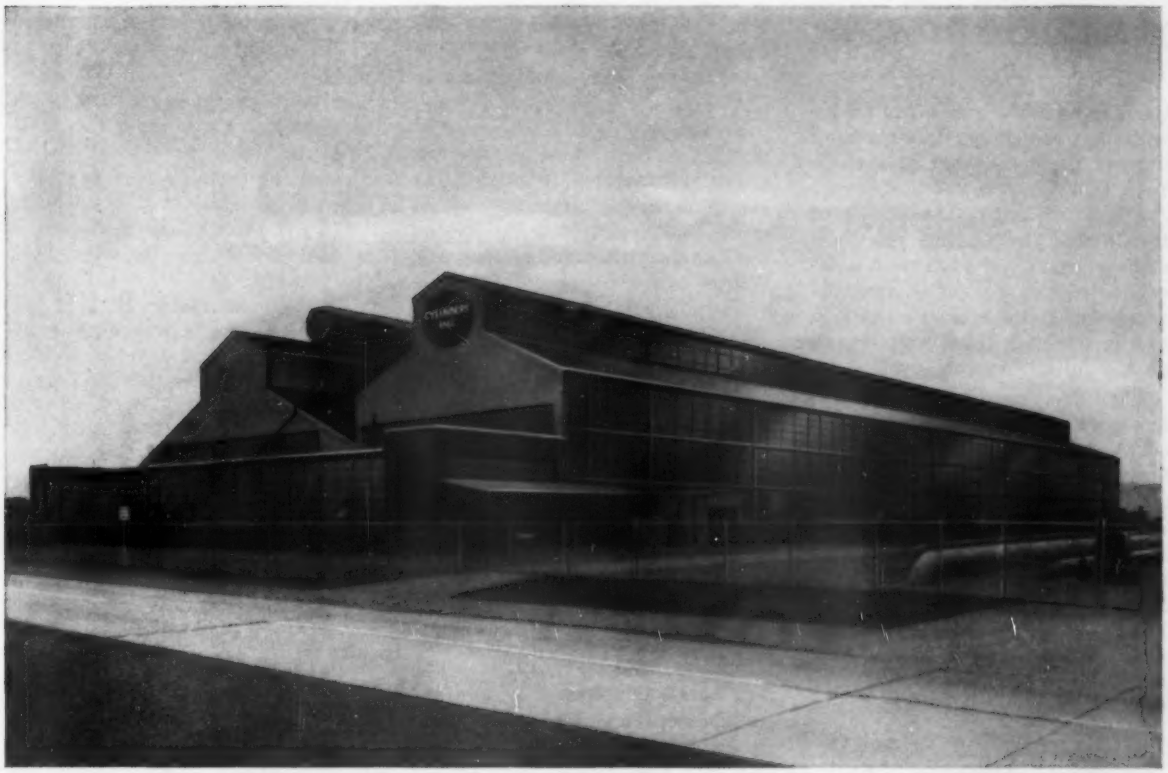
Year	Total Gas Ranges Sold	Percent Built-in	Total Electric Ranges Sold	Percent Built-in	Total Ranges Sold	Percent Built-in
1955	2,334,800	4.3	1,600,000	12.5	3,934,800	7.6
1956	2,177,400	7.6	1,585,000	24.3	3,762,400	14.7
1957	1,968,700	10.0	1,365,000	31.1	3,333,700	18.7
1958	1,884,400	12.3	1,354,500	40.2	3,218,900	24.1
1959	2,010,500	17.6	1,686,800	44.6	3,697,300	29.9
1960	1,815,800	17.5	1,545,600*	44.5*	3,361,400*	29.9*

*—BPN Estimate.

SHIPMENTS OF DOMESTIC GAS & ELECTRIC RANGES#

Year	Model	Gas	Electric
1955	Free-Standing	2,234,800	1,400,000
	Built-in	100,000	200,000
	Total	2,334,800	1,600,000
1956	Built-in	165,300	385,000
	Free-Standing	2,012,100	1,200,000
	Total	2,177,400	1,585,000
1957	Free-Standing	1,771,500	940,000
	Built-in	197,200	425,000
	Total	1,968,700	1,365,000
1958	Free-Standing	1,652,700	810,100
	Built-in	231,700	544,400
	Total	1,884,400	1,354,500
1959	Free-Standing	1,657,500	933,800
	Built-in	353,000	753,000
	Total	2,010,500	1,686,800
1960	Free-Standing	1,474,200	858,300*
	Built-in	341,600	687,300*
	Total	1,815,800	1,545,600*

#—Source: GAMA
*—BPN Estimate.



Specially Designed for Your Needs

Above is the new home of Cylinders, Inc. It is specially designed for your needs.

Into this 100,000 square feet of prime manufacturing space has gone the finest, the most efficient equipment available for the making of cylinders — the same fine equipment which helped our predecessor, the Linde division of Union Carbide, maintain its position of leadership in our industry.

This, then, is the physical aspect of your new Cylinders plant.

What does not show in the picture above is the intellectual background ...the engineering skill...the manufacturing know-how of the men who will operate this plant.

As successors to Linde we have the highest standard of performance to meet. This new, completely equipped plant, directed and operated by the most expert technicians available, assure our meeting that standard.

That is our pledge to you.

W. J. McEntee
President, Cylinders, Inc.

Be sure to visit our booths 181 and 182
at the LPGA Convention, April 30-May 3, 1961
Conrad Hilton Hotel, Chicago.

Cylinders, Inc. Successors to the propane and refrigerant cylinder manufacturing business of Linde Company, Division of Union Carbide Corporation.

1200 WEST BLANCKE ST., LINDEN, N. J.

them so that the range can be installed as completely free-standing unit, if the homeowner so desires. Says C. C. Wilson, "A homeowner can start an entire remodeling of the kitchen by buying this unit alone. Then, other appliances, cabinets, etc., can be added over the years until the complete built-in look is achieved. That way, there's no big initial expense involved."

Then too, suppose a housewife has lived with her kitchen for a couple of years and simply gets tired of the color scheme (as so many women are prone to do) and wants to change it? Sunray has an answer here: interchangeable panels. "All the housewife has to do," Mumma suggests, "is to buy new front panels in a different color, slide them in and she's in business. If the housewife puts in a conventional built-in unit, she's stuck with it for as long as the house (or she) is there. Otherwise she has a major remodeling job to do."

Sam Wilson brought up another selling point for the dealer, this one involving finances. Suppose a new homeowner buys a house with a completely built-in kitchen. Usually, the cost of the kitchen appliances are included in the mortgage. This means that with a 20- or 30-year mortgage, the homeowner is usually paying interest rates on those appliances for 20 or 30 years. Thus, this could raise the price of the range far above its original cost.

Then consider the fact that the homeowner may be reluctant to buy a new gas range when he is already still paying on the old one through the mortgage. "With this free-standing, built-in looking range," Sam points out, "the homeowner doesn't have as much money tied up in it and therefore he might be willing to make a change more often. It gives a little more financial flexibility."

The built-in looking free-standing gas ranges may even open a relatively new market which could be ideal for L. P. gas dealers. Again it was Sam Wilson who brought this up. "It's the motel market," he revealed. "We've had a pretty fair amount of interest in it and it should be good for the LPG dealer. Some of these motels are pretty big projects running into 50 to 75 units."

He referred to the deluxe model motels that have added kitchenettes and other features to attract the ever increasing family tourist trade. With motels being located well beyond the mains as they are, Wilson is no doubt right in his evaluation of them as being ideal for the LPG dealer; not only for the ranges but for the gas load also.

This brings up another point mentioned by C. C. Wilson, whose company worked with O'Keefe and Merritt in its development of the new range. "We have proven the acceptance of the design of this built-in looking, free-standing range with our electric models," he stated. "Now we are bringing that design to the gas market and we feel that the same type of person would buy a gas range as would buy an electric one.

"Farmers can spend just as much money for a gas range as for an electric. Therefore, if they can buy a range of equal quality and as different as this type of range is, the chances of selling them a gas range may be even better. That's because they are already using L. P. gas on the farm for multiple uses. The low cost of the fuel they're already using could induce them to buy this gas range."

All of this seems logical enough; so much so that one is prompted to ask: Why then, didn't the gas range manufacturers bring out such a model long before they did? The manufacturers interviewed had two basic answers. One was that they did not feel the market was ready for it. The other was that they wanted to wait until they had perfected this type range to the point where it was the equal of its extremely successful electric counterpart.

Regarding the first point, one manufacturer who was about to bring its model out and then determined the market was not ready, compared the action to the ill-fated Kaiser automobile. "If Kaiser had brought out his small car two or three years ago," he offered, "he would have had a real hit. As it was, he brought it out too soon—before the market was ready—and it was a flop. We now feel the market's ready for this type of range."

The manufacturers gave pretty much the same answer when asked why they felt the market was now ready for this gas range. Reports from their field representatives indicated the amazing success of the electric free-stander. Salesmen relayed the pleas of gas dealers who wanted something to meet that competition.

The second factor that helped the manufacturers to determine the timeliness of the entry into the market of these ranges was modernity. "It has all the features of a Gold Star range," is the way one manufacturer described his product. All the housewife has to do is to name the feature she wants in a range and she is sure to find it in one of these. Caloric has its color-coordinating service; Roper has the automatic top burner; Sunray has the brushed chrome tops; and Tappan has the flame temperature control. As Tappan's Wilson put it, "We've held back until we could include all the features of a deluxe range onto this range."

All manufacturers interviewed are presently making the range in standard dimensions. All have high hopes for its acceptance by the public. "We think it's really going to go over," says Roper's Wilson. Thirty days after starting production, Tappan moved its production facilities up and "these will be boosted as the demand comes forward." Sunray, which had been manufacturing an electric counterpart, has changed that production line over to gas models. "Retail sales of this model have been fantastic," reports Mumma. Caloric has been in full production since mid-1960.

There will be promotional and sales aids put out by the manufacturers designed to help the L. P. gas dealer sell these ranges. Already, the new ranges are being shown at both industry and public shows. Consumer appeal advertising campaigns have started. Tappan's Wilson says, "Undoubtedly, we will have some promotional aids for the LPG dealer in the future."

The market is there; the range is there; there is more help on the way. Now it is up to the combination LP gas-appliance selling dealer to get back into the range selling market. ■

WARD W. KING, WARD W. KING PROPANE GAS SERVICE, YORK, NEBRASKA

"We increased our thru-put from 50,000 to 2,000,000 gallons of Texaco LP-Gas in only 2 years. It's a fine product. And, the Texaco people are jobber-minded—they go out of their way to help us do an efficient, profitable business. That's why we like to sell the best...Texaco."

5 reasons why you can grow with Texaco

1. Texaco is jobber-minded. Proof: 842 Consignees and Distributors of Texaco Products have been with Texaco over 20 years, some over 45 years.
2. Profitable and proved sales policies. Texaco does not compete with its independent Distributors of LP-Gas.
3. Dependable, efficient delivery in a new fleet of tank cars, from 31 strategically located production areas.
4. Immediate acceptance. Texaco LP-Gas is sold under the nationally-known trademark, the famous Texaco red star with the green "T."
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TEAM YOUR NAME with Texaco for a profitable future. Send coupon today: Texaco Inc., LPG Sales Division, P.O. Box 2420, Philtower Bldg., Tulsa, Okla.; 3350 Wilshire Blvd., Los Angeles, Calif.; Texex, 237 Seventh Avenue, West, Calgary, Alberta, Canada.

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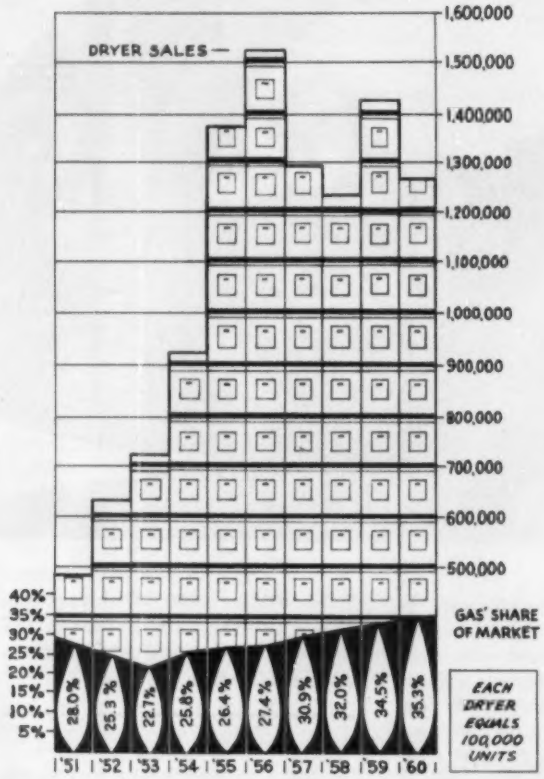
Gas gains a growing share of a rapidly growing market

ROBERT CLAY • Managing Editor



The gas industries' share of the clothes dryer market has grown exactly 12.5 per cent in the last eight years. The low point was 22.79 per cent of the market in 1953, 168,000 out of a total of 737,000 dryers. The low point, unit-wise, was 1951, when there were 138,000 gas dryers out of a total of 492,000. The high point, unit-wise, was 1959, when 486,000 gas dryers were sold. On a percentage-of-the-market basis, however, last year was the best with 35.29 per cent, capping eight straight years of increases. Figures across the flames indicate the gas share of the clothes dryer market for each year.

"DRYERS WERE DREARY, AS FAR AS SALES WENT," said "Electrical Merchandising Week" (see following page) in summing up 1959. And well might the kilowatters' bible shed a tear. For in the general white goods downturn, electric dryers dropped 12 per cent (109,000 units) while gas dryers dropped only 8.6 per cent.

But if you delve a bit farther into the history of electric dryer sales, you'll find an even drearier picture. In the last eight years, the gas dryer has captured an additional 12.5 per cent of the dryer market and now accounts for 35.29 per cent of the total.

What's more, the American Home Laundry Manufacturers' Assn. believes this trend will increase this year. That group expects the 1961 gas dryer sales increase to nearly double the '61 electric dryer increase. While they look for the electric models to sell 4.7 per cent better, they foresee a 9.0 per cent jump in gas dryers.

Thus, as with water heaters, there is again a really substantial trend toward gas. And, as is the case with water heaters, several other indisputable facts are in your favor:

- Clothes dryers, although they became increasingly popular in the early '50's and enjoyed a big breakthrough in 1955, still have a tremendous market potential. Less than 20 per cent of the nation's wired homes have dryers while 95 per cent have electric washers. The current sales gap is not that big, but last year washers outsold dryers almost 3 to 1, 3.38 million to 1.25 million.
- Dryers are still novel and therefore interesting and exciting, especially in their new developments. Hottest thing in dryers these days is automatic control. Maytag, for instance, has "electric drying". Instead of depending on thermostatic or across-the-drum-temperature-drop control, the Maytag system uses electronic sensing elements in the drum to pass a slight electric current until the moisture drops below a predetermined level. Whirlpool, meanwhile, champions its "modulated heat," which decreases the heat as the moisture in the clothes decreases.
- Dryers are still new enough that substantial,

(*Please turn to page* 85)

for lasting winter comfort
in basementless homes...

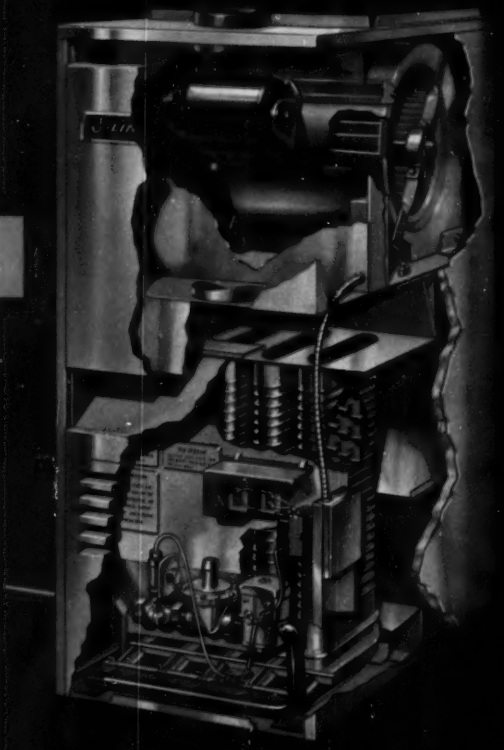
Presenting new . . .

J-LINE
COUNTER-FLOW FURNACES

PEAK PERFORMANCE
COMPETITIVELY PRICED

NOW . . . every home can afford true, quality heating equipment! The new J-Line models are designed to a new concept in performance and value. This is made possible through savings in modern design (no fancy decorations), and high production tooling . . . at no sacrifice in quality.

The new J-Line has the many exclusive features and complaint-free engineering that have made the Janitrol name famous for over 50 years. Compare the features . . . compare the price. You'll find the J-Line has advantages not even offered in higher priced lines.



J-line furnaces are available in both counter-flow or upflow models. For extra air delivery, belt drive blowers may be ordered. Sizes from 65,000 to 120,000 Btu hr. meet most requirements for new homes, apartments or modernization.

THESE EXTRA QUALITY FEATURES ARE STANDARD!

Multi-Thermex Heat Exchanger—the famous Janitrol design that produces maximum heat transfer and tight-fisted fuel economy.

Ribbon-flame Burners—produce clean, sharp intense heat . . . burn with unusual quietness.

Two-pass air flow—a unique internal design that directs the air over the heat exchanger twice, for extra heating efficiency.

Trim Styling—crisp, modern cabinet design in warm two-tone colors that add richness to any home.

Compact, Space-Saving—requires less than four square feet of floor space.

Quiet—blowers are dynamically balanced and rubber-cushion supported for quiet air delivery.

Unidrive Blower—full capacity air delivery with lower power consumption—saves at least $5.00 per year.

5-Year Lubricated Bearings—on blower motor save on maintenance.

Precision Controls—sensitive thermostat, pilot and operating controls are enclosed and protected from dirt.

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WIRE COLLECT FOR FACTS

You owe it to yourself to get the full story on the amazing new J-Line—plus the fabulous Janitrol SELECT DEALER PROGRAM. This exclusive program gives you *action* in place of promises!

CALL WESTERN UNION NOW! ADDRESS YOUR COLLECT WIRE TO:

HARRY C. GURNEY, General Sales Manager
Janitrol Heating and Air Conditioning
A Division of Midland-Ross Corporation, Columbus 16, Ohio

Just say: "Rush me full details on the new J-Line and the Janitrol Select Dealer Program."

The Profit Parade in the '60's will be lead by Janitrol Select Dealers

JANITROL HEATING
& AIR CONDITIONING
A Division of Midland-Ross Corporation
Columbus 16, Ohio

Is the roof about to fall in on the kilowatters?

ROBERT CLAY • Managing Editor

"GAS WATER HEATERS CONTINUE(D) TO BEAT OUT ELECTRICS BY A MILE. . . . As for the long-range water heater picture, there were hints by the big electric manufacturers that they would drop the product all together if electric utilities didn't show more promoting spirit."

The author of that statement is none other than "Electrical Merchandising Week," the weekly bible of the electric appliance industry. Figures contained in that publication bear good evidence to back up that statement. Electric water heater sales dropped from 845,000 units in 1951 to 715,000 units last year. That's an 18 per cent plunge.

The really significant fact is that while the number of electric water heaters sold was dropping, the total water heater market was expanding—and expanding considerably. In 1959, for example, nearly 1 million more water heaters were sold than in 1951! Also in '59, gas water heaters reached their peak, both in total number sold, 2.95 million, and in percentage of the market, 79.04 per cent.

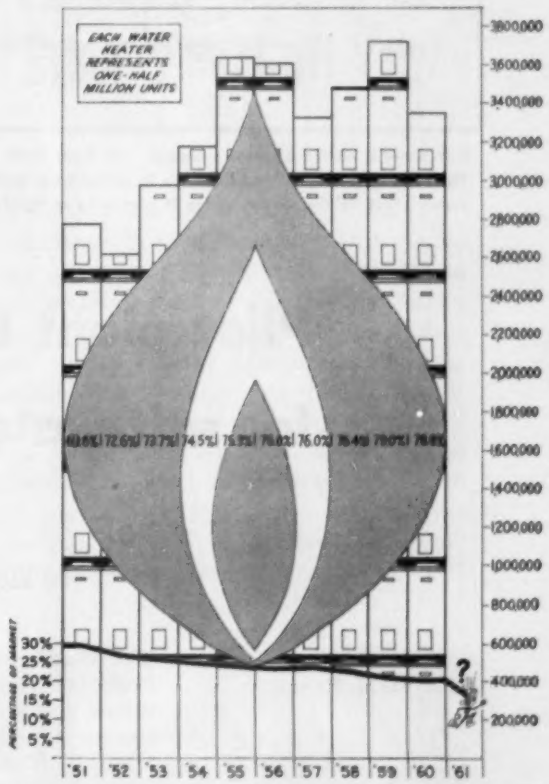
A pessimist will be quick to say, "Sure, but that was two years ago. Last year, gas water heaters dropped 10 per cent and GAMA says they'll only gain back 6 per cent in '61."

While that's true, it's equally true that last year's total was still 38 per cent above gas heater sales ten years ago. And, let us repeat, over the same period, electric heaters *dropped* 18 per cent. *There* is an accelerating trend in your favor, if we ever saw one!

Several other indisputable facts are in your favor:

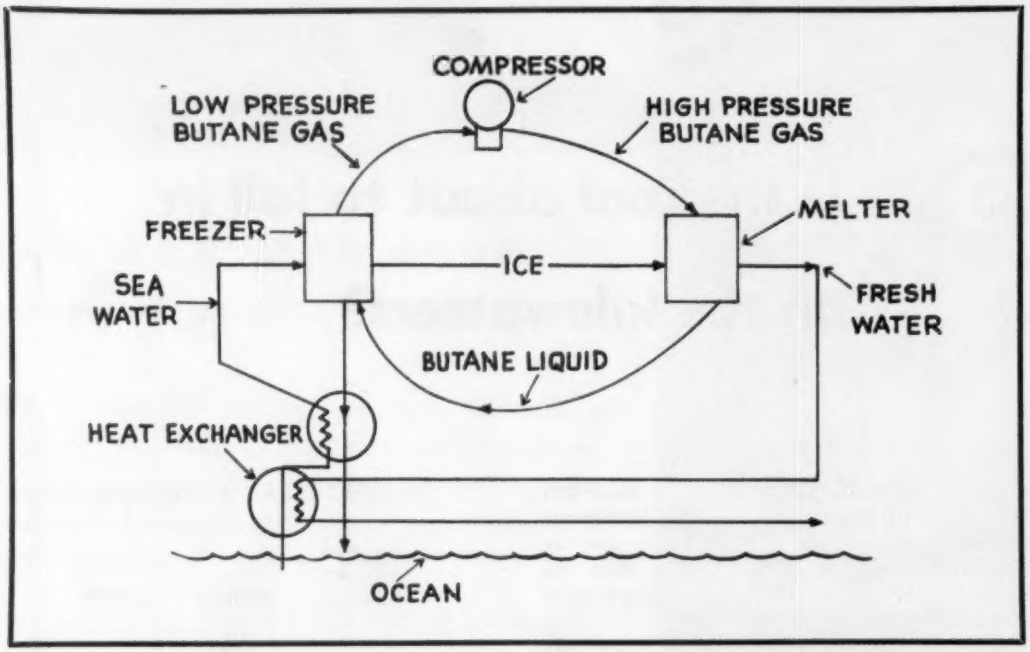
- Water heaters are now a virtual necessity.
- Water heaters will continue to wear out, meaning an ever-increasing replacement market. There are now over 15 million water heaters (including many bottom-of-the-line, short-life models) between 5 and 10 years old and countless millions older than that.
- Water heaters will be in greater demand for new homes, since residential construction is scheduled to rise in '61.
- Water heaters will be easier to buy, since the

(Please turn to page 84)



Here, graphically, is why the electric water heater might go off the market. While the water heater market has been generally expanding healthily, electricity's share of that market has decreased at a decidedly unhealthy rate, nearly 10 per cent in one nine-year period. During the last decade, the kilowatters' highest penetration of the water heater market, 30.38 per cent, was in the market's poorest year, 1951. Its poorest penetration, 20.95 per cent, was in the market's best year, 1959. Last year, its share, 21.18 per cent, was only a tiny fraction better as gas water heaters outsold electric models 2,662,000 to 715,000.

• *Butane may boost world's water production*



Salt water is chilled by heat exchange with fresh water and rejected brine, partially frozen in contact with butane. The brine is washed off, and the ice is moved to a melter. Butane vapor leaves the freezer and is piped to a compressor, then to the melter, where it reverts to a liquid and is recycled to the freezer.

Pilot plant to test butane for salt-water conversion

Florida facility in race for selection of a process to . . be used in government-sponsored demonstration plant

BPN Field Report

HARRY J. MILLER

THE YEAR 1960 SAW CONGRESS APPROPRIATING more than a billion dollars for water resource development for the second consecutive year. This is more than Uncle Sam spent during the first 135 years of our nation's existence. By 1975 our population will reach 225 million and these citizens will need the fantastic amount of 530 billion gallons a day of a good, potable water.

And it'll cost taxpayers somewhere between $54 and $74 billion dollars to meet the country's water needs in 1980, as reported by a research report to the Senate Select Committee on National Water Resources.*

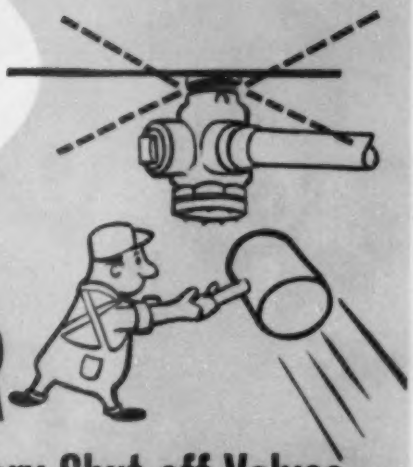
That butane may well play a most significant role in the solution of this complex problem is evident in the frantic race now under way on Weedon Island at the northeast tip of St. Petersburg, Florida.

Rapidly nearing completion there is the nation's *only* saline water conversion pilot plant to use the Cornell University freezing proc-

* Resources for the Future, Inc., prepared by Dr. Nathaniel Wollman, Professor of Economics, U. of New Mexico.

Little Joe Says:

Shear it off and you'll still get Positive Shut-off!



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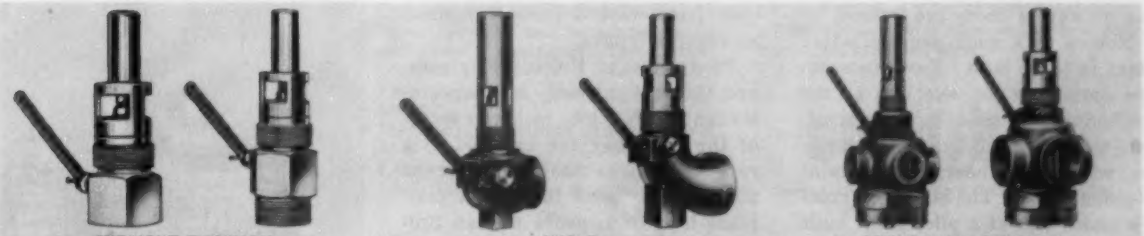
Fisher Governor Company, Marshalltown, Iowa.



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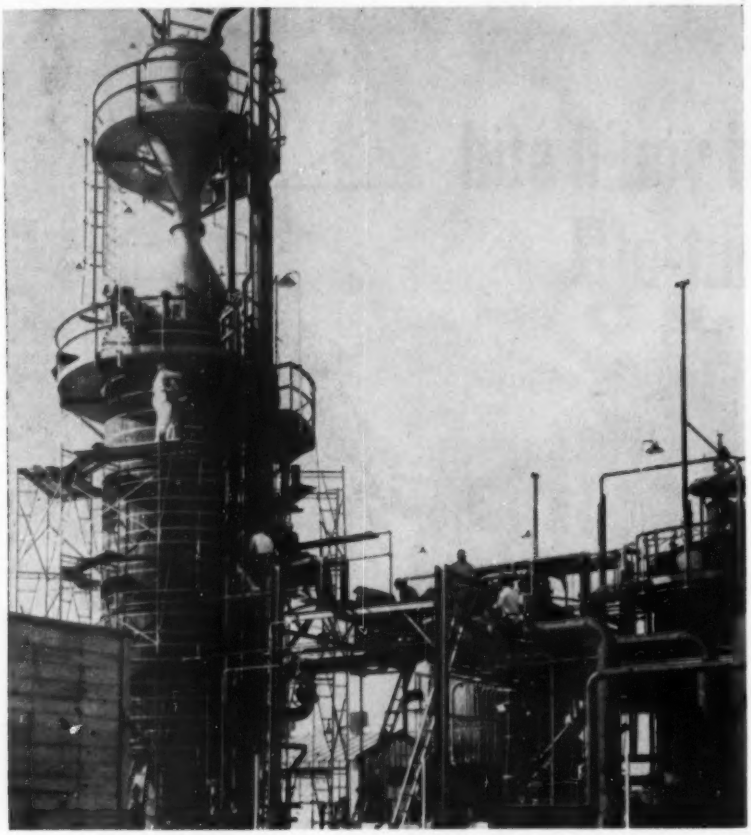


This may be an historic site if the Cornell butane process wins out in the race to find an economical method of converting salt water to fresh water. It's the pilot plant at Weedon Island, off the coast of Florida.

ess, which may change the course of world history and make the deserts bloom again.

At the present time, there are four saline conversion plants contracted for under a program sponsored by the U. S. Department of the Interior. None use freezing as a means of obtaining fresh water, nor do any of them use butane.

Now a fifth such demonstration plant is to be built. Two processes are competing for selection as the method to be used in this plant. One is the Cornell University process, which will undergo its tests at Weedon Island. The other is a process under test at a pilot plant built by Carrier Corp. at Syracuse, N. Y.

At Weedon Island, butane refrigerant is vaporized in direct contact with salt water. In Carrier's pilot plant, located at Syracuse, N. Y., the freezing process is carried to almost zero temperatures.

Results of the pilot studies will be used by the government in the selection of the fifth full-scale plant, which will probably be located on the East Coast.

Engineering interest is at fever pitch as the $500,000 Weedon plant nears its target date for fresh water production to determine if the Cornell process is practical, low cost fresh-water-from-salt method so eagerly sought.

Paul Quenin, Project Engineer, and Allen Campbell, job superintendent at Weedon, make no secret of the fact they are involved in a race in which the plant cost of $500,000 is "peanuts." "This pilot plant is only to prove we can produce water at a cost of 50 cents per 1000 gallons," says Quenin. "There are places in the United States today where $2 per 1000 gallons is a practical price, and a California town was paying $5."

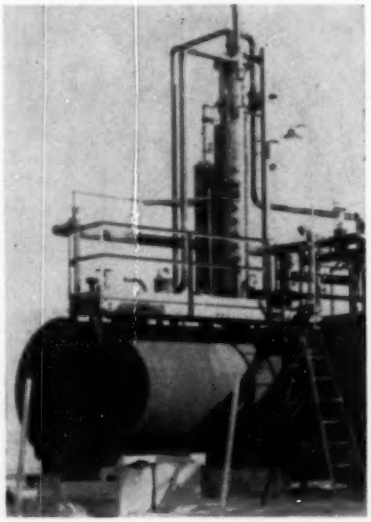
By comparison, the first of the five saline conversion plants, to be erected in Freeport, Texas under a $1,246,250 contract utilizes the longtube - vertical multiple effect distillation process using a new technique for avoiding scale formation by use of a suspension of fine solids in the brine. This type of operation involves a series of boiling chambers (effects) that employ heat from the vapor produced in the preceding chamber, to evaporate more brine in the next chamber.

Expectations are that the Freeport plant will produce fresh water at the rate of 1 million gal. per day, at a cost of about $1 per thousand gals. Three other plants of the Office of Saline Water have been set up: an electrodialysis process plant at Webster, S. D.; a multi-stage flash distillation unit at Point Loma, Calif., and a forced circulation plant at Roswell, N. M.

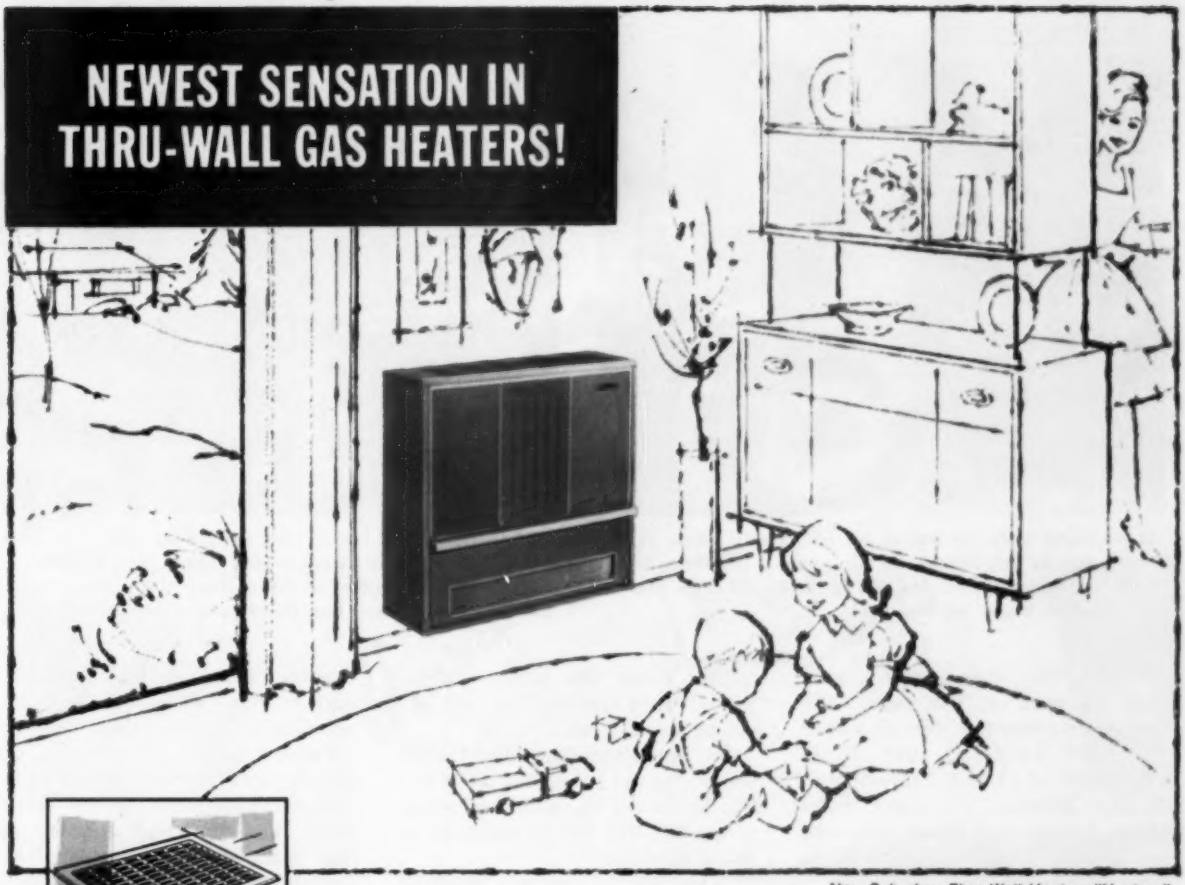
It is the fifth plant, to utilize some type of freezing process, which is scheduled for the east coast, that may be patterned after the butane Cornell process plant at Weedon Island.

"A major break-through this past year has been this freezing process," says Quenin. "It has reduced the target price from $1 per 1000 to 50 cents per 1000 gallons. Your major cost is the first cost-construction. After that, the plant has very low maintenance and operation cost." Quenin said the government is paying about three-quarters of

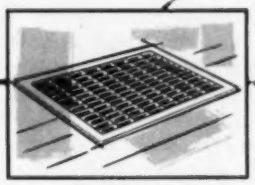
A complex of towers and tanks, as shown below, is needed in the process. Plant will make 35,000 gal daily.



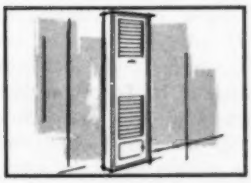
NEWEST SENSATION IN THRU-WALL GAS HEATERS!



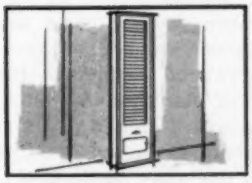
New Suburban Thru-Wall Heater—"Ventura"



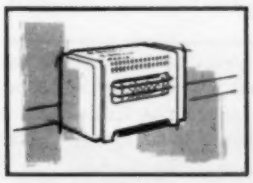
Floor Furnaces



Counter-Flo Wall Heaters



Gravity Wall Heaters



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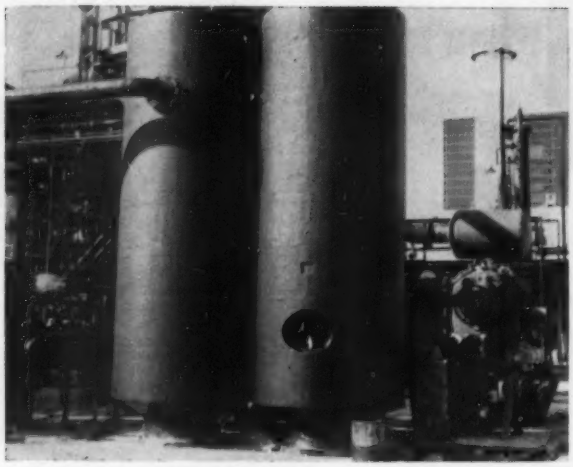
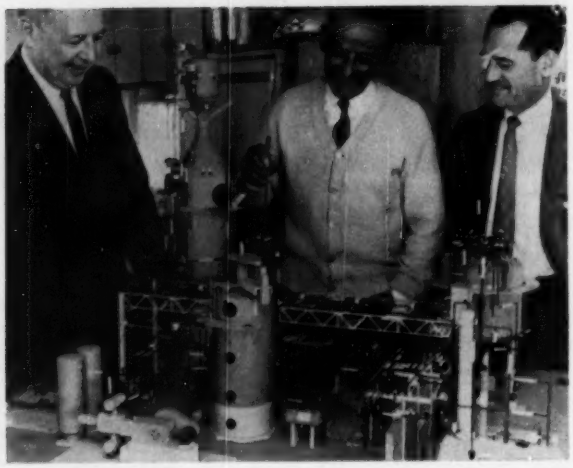


In the melter units, ice crystals are melted with butane vapor. In this step, by heat transfer, the butane gas is returned to liquid form for recyling through the freezing units, where the process of conversion begins all over again.



Scale model of the nation's only saline water conversion pilot plant using the Cornell freezing process. Left to right: A. P. Pereze, engineering vice president of Florida Power Corp., Allen Campbell, job superintendent, Paul Quenin, project engineer.

its cost, with Blaw-Knox Co. making up most of the rest. (The processes under test were developed by Blaw-Knox and Prof. H. F. Weigandt of Cornell University.)

Says Quenin, "For years it has been known that water could be purified by freezing. This application of direct contact refrigeration was first used by Japanese scientists about 3 years ago. Then Dr. Weigandt applied it to reclaiming water."

Quenin explains the process in which butane is of vital importance. "In the Cornell process, salt water mixed with butane is pumped into the Rotocel, a rotating basket device. The saline feed is chilled by heat exchange with fresh water and rejected brine, then partially frozen.

"By freezing about half the water, you concentrate the impurities in the other half. This freezing step produces overhead butane vapor, which is removed and processed, and a slurry of ice in brine. The slurry goes into a washing device where brine is drained off and the ice crystals washed free of adhering water, then the ice is conveyed to a melter unit.

"Here the crystals are melted by introducing butane vapor at slightly higher pressure, and the potable water is then sent to storage tanks, while the brine is pumped back into Tampa Bay.

"For every two pounds of sea water," says Quenin, "we will get one pound of fresh."

Job Superintendent Allen Campbell makes the point: "It takes 144 Btu to change one pound of water to ice, but 970 Btu to evaporate a pound of water.

"This is an advantage over other processes because it takes power and energy to produce those Btu.

"A plant using a freeze process must handle a solid phase; lose control of your temperature a bit and you have to shut down and thaw out. For this reason, agitators constantly keep the slurry loose."

According to Quenin, "the pilot plant, with a daily production of 35,000 gallons of fresh water, will continue its operation for three to six months"—until the temperature approach needed has been determined.

"The whole world wants water," adds Quenin. "We've had inquiries about this project from all over the world. The British government, for instance, is holding off building some plants in the Near East until it sees how we do."

Cost comparisons will be difficult, Quenin said, because the operation is small and actually two pilot plants are to be under test at Weedon. One is the Blaw-Knox system; the other is Professor Wiegandt's butane system, which combines the Rotocel freezing-washing operation with the melter tank process, all in one unit resembling a Cape Canaveral rocket.

Paradoxically, neither the U. S. nor the world at large suffers from an intrinsic shortage of fresh water. But the great difficulty is that much of this water is often available only seasonally and poorly distributed. Vast quantities go to waste in floods and too much rainfall. while vast stretches of the earth remain parched.

Nevertheless, there is a colossal glut of water: in the oceans, which cover 71 per cent of the planet there is more than 300 million cubic miles of it. To get an idea of the content of this salty fluid, a cubic mile of oceanic water weighs over 4½ billion tons! In addition, it contains 117 million tons of salt. If you multiply these figures by 300 million, you get some idea of the astronomical benefits that can be conferred by butane in the process of desalting sea water. As Quenin says: "This can be a great political aid. If we can give foreign nations the water to develop their lands, we can give them the solution to many of their problems." ■

A reprint of this article can be obtained by writing on company letterhead to the Editor, BUTANE-PROPANE NEWS, 198 S. Alvarado St., Los Angeles 57, Cal.

TWO GREAT NAMES!

In the past twenty years, the name of Anchor has become well known for the personnel it's developed to take care of your needs. And now, as a further step in that development, Anchor teams up with the Mobil Oil Company to insure the continuity of the high quality of its service. In the years to come, you can continue to depend on the Anchor Petroleum Division of the Mobil Oil Company, located at Tulsa, Oklahoma, for the same fine business policies and personal attention that mean service at its best.

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Sussex County Civil Defense Center, first of its kind in New Jersey.

CD officials pin hopes on LPG for disaster feeding

If war should start, Sussex County will be feeding thousands of people from their LPG kitchen.

MORE AND MORE THESE DAYS, WE AS INDIVIDUALS become personally aware of Civil Defense. Worsening international situations, "scare" headlines in newspapers, alarmed radio and television commentators all bring home the reported need for bomb shelters, evacuation routes, first aid courses, etc. To take all this gloom and extract some good from it is indeed an accomplishment. Littell's Gas Service of Franklin, N. J., has done just that.

The Sussex County Civil Defense Training Center, first of its kind in New Jersey and serving as a model for similar structures throughout the country, is using propane for its underground kitchen. The idea of using LPG in the kitchen was "sold" to county C. D. authorities through the alertness and aggressiveness of Robert Littell, who directs the sales efforts of the family-owned LPG corporation.

A BPN Exclusive

"I saw an ad in the newspaper one night," Littell reports, "requesting bids to be submitted to the county freeholders for the installation of a kitchen in the training center. There were no specifications for the fuel; they just wanted bids on the kitchen. So, I went after it and got it."

Sounds simple, doesn't it? Yet Littell's was the only LPG dealer alert enough to even go after the job. Bob went to a kitchen supply company in nearby Newark and worked out prices with them for the ranges and other equipment.

The buried LPG tank, with only the hood showing, has a capacity of 500 gal. It holds a 15-day supply of gas.

Adding these to his own figures for the installation of a 500-gal. storage tank, piping and regulators, he submitted his bid and came out low man.

One might question the value of going after an installation which is, basically, a "one-time" load. It could be asked, "What's the profit in putting in a tank, equipment and kitchen that may never be used (we hope) under the conditions for which it is designed and may only be used during test?"

Littell has the answers here. First, he charges it off to good public relations. Second, he feels he is "selling" the liquefied petroleum gas industry—remember, this center is a model for the rest of the country. Third, he has built himself an excellent sales tool to use in trying to convince potential commercial and industrial customers of the value of using LPG as a fuel.

"We feel it's a prestige-type of thing," Littell says when speaking of that third point. "To my way of thinking, it's a good deal for us to be able to tell prospective customers that we're capable of doing such a job as that. The fact that the local government (and indirectly, the National government, too) has accepted our job and our fuel, doesn't hurt us either when we're trying to sell someone else."

The building in which Littell's made the installation serves as a combination training center and control center for trainees in fire fighting, police work, warden service, health and welfare problems,

"I wouldn't take our radio out now if it cost **twice** what it did." That's how Victor Lagrange, president of Home Gas and Fuel Co., Inc. of Lake Charles, Louisiana feels about Motorola 2-way radio. His records **prove** that savings in mileage and phone bills alone, more than pay for his radio—so that means the savings in driver time and the resulting additional business can be counted as **profit**. And Mr. Lagrange has found new accounts easier to open and old ones easier to hold since he can provide swift, reliable radio dispatched service. You owe it to yourself to find out how Motorola 2-way radio can cut **your** costs—add to **your** profits. Get a demonstration soon.

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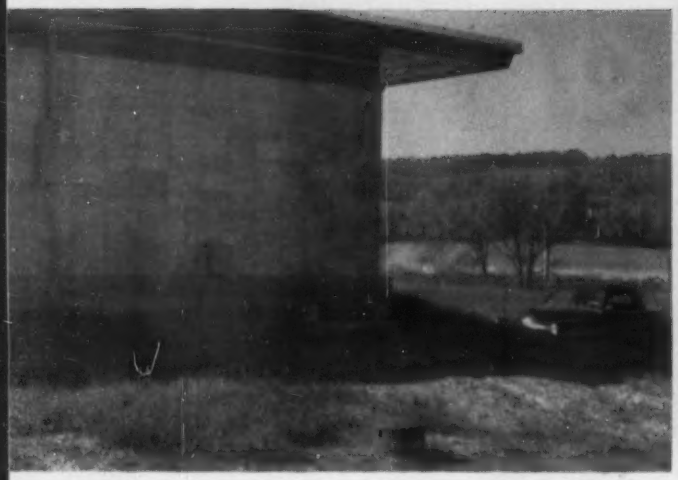

The tank was buried about 5 ft deep and 15 ft from the main building. The tank and line joints are coated with tar.

The $500 kitchen, equipped with stainless steel, was sold to CD agency by Littell's Gas Service of Franklin, New Jersey.

radiological defense, rescue work and communications. It is located in a rural area some 20 miles from Littell's and about 60 miles from New York City in a county which has been ticketed as a place of refuge for 600,000 Metropolitan New Yorkers in the event of enemy air attack.

The kitchen is in the basement of a building that is roughly 50 ft x 100 ft x 12 ft. Covering the kitchen are 12 inches of concrete and 10 tons of steel. It is adjacent to the dining hall and the heart of the operation, which consists of a command room, radio and decontamination rooms. Costing $65,000, the building was constructed as a federal aid project with the county being reimbursed 50 per cent of the cost.

Major O. P. Armstrong, deputy C. D. coordinator who heads a three-man staff, says of the propane kitchen: "We have been convinced of the value of this fuel for emergency purposes. Field tests have shown that many bomb-damaged buildings can still utilize their kitchens for emergency feeding and provide thousands of hot meals when propane is used."

Part of his conviction — aside from that imparted by Littell's selling efforts—comes from the results obtained in "Operation Cue" at the Atomic Energy Commission's Nevada test site. The test indicated that propane equipment stands up well when exposed to atomic effects. Thus the Sussex County authorities felt that the use of propane fuel would be best.*

Another big factor in the Operation Cue test that helped influence the New Jersey installation was the fact that many bomb-damaged buildings where utility service had been disrupted could be converted to bottled gas cylinders or tanks for immediate operation.

To provide fuel for the Sussex County unit's kitchen, Littell's installed a 500-gal. storage tank. That size tank, which will hold at least a 15-day supply of gas, was determined by civilian defense standards which call for a minimum 15-day supply of anything, whether it be canned beans, flashlight batteries, or fuel. It was buried about 5 ft deep and 15 ft from the main building. The tank is coated with bitumastic tar made by Barrett Div. of Allied Chemical Corp. All of the joints on the high-pressure line (it is a two-stage system) were covered with roofing tar. "We feel it's a lifetime job," comments Littell.

The piping itself is ¾-in. for the low-pressure system and ½-in. for high pressure. The $500 worth of kitchen equipment installed by Littell's is all stainless steel. The entire installation—tank, piping, regulators, ranges, etc.—was sold outright to the C. D. agency. Littell's made only a slight profit.

Unfortunately, this job could have been an even bigger one for LPG. In addition to providing the fuel for the ranges, coffee urn and dish washer warmer, the heating facilities could well have been propane-fueled. So also could have been the generators that supply the electrical power for lighting, radio communications, etc. However, Littell recalls that by the time he had hear about the construction of the installation, bids for those jobs had already been accepted and work begun.

No special training in the handling of LPG was given to the civilian defense personnel who will use the equipment because, as Littell says, "LP is pretty well known up in this neck of the woods." Littell's will also supply whatever service on the installation that may be needed, although there was no actual service contract signed. "We operate that way with all our accounts," Bob reveals. "We feel that as long as we are supplying gas to anybody, service is a necessary corollary and Littell's will take care of it."

Returning for a moment to the three reasons Littell gave for doing this job, if you can accomplish them and still make a profit—regardless of how slight—it is, in Littell's words, "a good deal." Even without a financial gain, it still might well be. ■

A reprint of this article can be obtained by writing on company letterhead to the Editor, BUTANE-PROPANE NEWS, 198 S. Alvarado St., Los Angeles 57, Cal.

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* See BPN issue June 1955, page 29 for further information concerning the AEC test.

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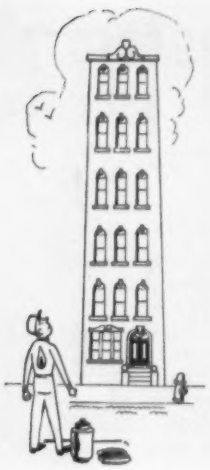


• You've got to raise your sights to find new business

Roof-top loads help boost DelVal sales 250 per cent

WILLIAM T. HARPER • Eastern Editor

WHEN A COMPANY can increase its sales from 1.2 million to 3 million gals. in less than four years, it must have a pretty sound formula for success.

Delaware Valley Propane Co. has such a formula: Build industrial load.

Says John Long, president of the Merchantville, N. J. firm: *"All* of our growth since February 1957 has come from industrial applications." That, incidentally, is the date he took over as president.

One of Long's prime targets has been the tar-heating load, particularly among roofing contractors. This kind of business alone has brought Delaware Valley Propane annual sales of nearly a half-million gal., and—happily—85 per cent occurs in the summer time.

Long got into the sale of LPG for tar kettles early in 1959. The company's utilization engineer, Don Maguire, rigged up a portable torch with a 20-lb. cylinder, and installed it in his automobile. On at least two occasions, Maguire was out searching for new business in the field and happened on contractor's crews who were shut down due to the faulty equipment and fuel they were using. He immediately put his portable rig to work and got the crews going again, much to the delight of the foremen.

A BPN Exclusive

Those "live" demonstrations went a long way toward helping convince the contractors that they should convert to propane. Long also loaned hookups to other contractors on a trial basis and let them convince themselves.

Kerosene has long been the big fuel for tar pot usage in the Northeast. That fuel is delivered in huge drums, from which smaller quantities are pumped into other open containers to be used as needed.

"We used to worry about kerosene slopping all over the place when we had to fill the containers on the site," says a foreman for the Philadelphia contractor, Warren-Erhardt Co. "It was a real fire hazard, with kerosene all over the ground and the burners going full blast. More than once, we had a truck full of tar go up in smoke—and I do mean *smoke!"*

With LPG, this fire hazard is eliminated simply because the fuel is delivered in sealed containers. There is no fuel transfer on the job. The gas-tight propane container also does away with the problem of fuel evaporation, an additional fire hazard.

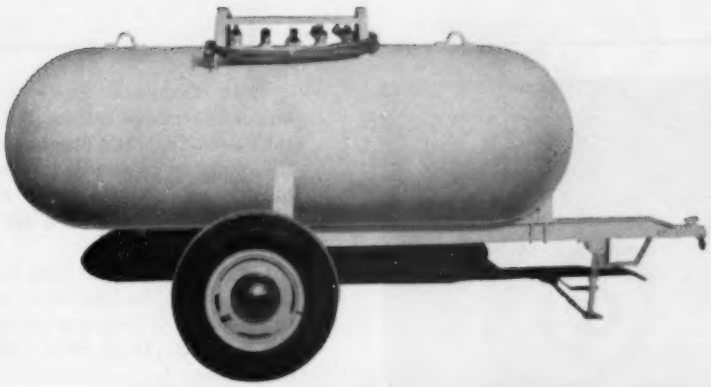
Safety is only one of several selling points favoring LPG. Equipment "down-time" has been almost completely eliminated. While using kerosene, Warren-Erhardt found that the burner ports were continually becoming clogged with soot and carbon deposits. It took time and money to clean them out. If the equipment failed on the job, as frequently happened, the entire crew was idled, sometimes for several hours. Then as many as 10 men in the contractor's working crew might have to stand by waiting for repairs to be made. Labor costs would rise.

LPG's cleanliness put an end to this kind of headache.

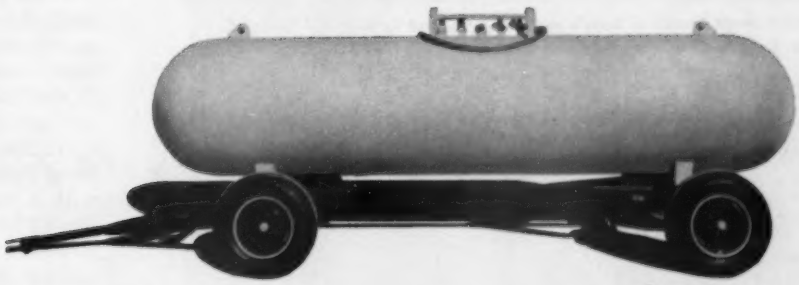
Long has also been successful in selling customers on the fact that LPG will save them money. The per-gallon price is actually higher than for kerosene, but this is a minor disadvantage when compared with other cost considerations. Fuel price becomes secondary when a customer begins thinking about elimination of down-time and start-up time.

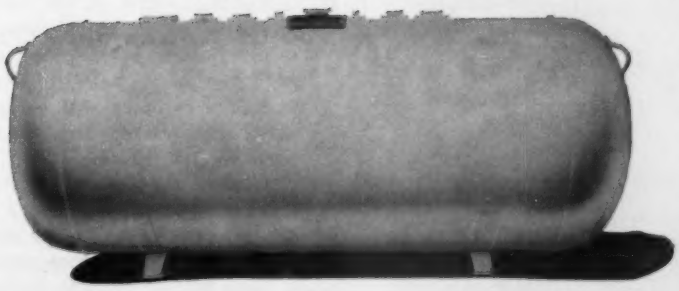
Long likes to cite (for prospective customers) the experiences of Warren-Erhardt. When using kerosene, the company had been required to bring a man in three or four hours before a job was to begin merely to get the burners lighted so the tar would be melted and ready to use when the full crew reported for work. This piled more labor hours on each shift, and ran up costs accordingly.

Since switching to propane as a



TRINITY BUILDS QUALITY INTO NH_3 EQUIPMENT





Modern farming needs quality equipment for continued growth and progress. In line with these needs, Trinity designs and fabricates the best in Anhydrous Ammonia (NH_3) storage vessels. Engineering specifications strictly adhere to the ASME Code and state regulations. Fine surface finishing and painting reduces upkeep to a minimum. If you need a source of supply for QUALITY NH_3 equipment, call on Trinity.

TRINITY

STEEL COMPANY, INC.

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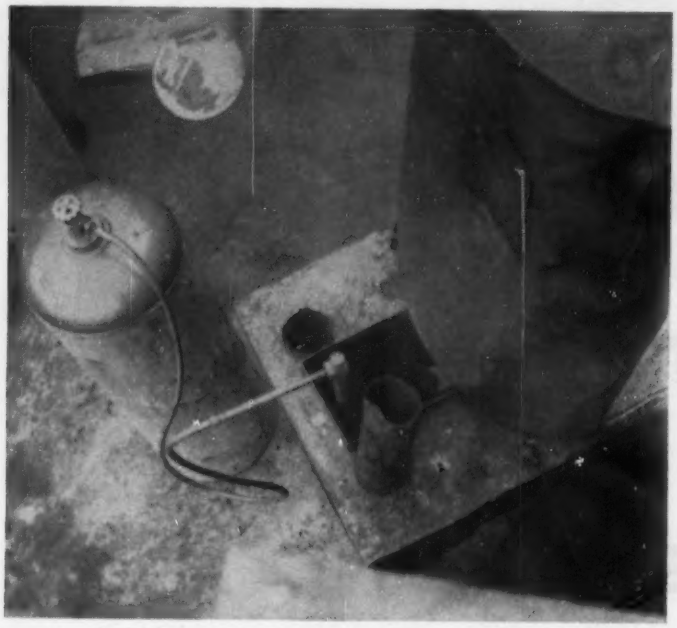
Francesville, Ind. When in Mexico City visit Tanques de Acero Trinity, S.A.



An L-shaped torch of Long's own design is used to heat the tar kettles on the site at a Warren-Erhardt job.

A straight torch is hooked up to a Warren-Erhardt truck, heating a valve so the liquid tar will flow freely through it.

fuel, the company has found that it now takes only a matter of minutes for the LPG to create the amount of heat necessary to melt the tar needed to start the job.

Warren-Erhardt is only one of a half-dozen large tar-heating customers. Each takes from 25 to 50 cylinders per delivery. Another 55 or 60 roofers use three to six tanks per delivery.

All deliveries are made on a cylinder change-out basis, with the larger customers calling DelVal as they need fuel. It's uneconomic for the company to serve smaller users in this way, however, so roofing supply houses have been set up as retail LPG dealers.

Long uses a burner (see illustrations) which he designed himself with help from Maguire and others. He modified the inside walls of the burner in such a way as to cause the flame to make a swirling action. At it circulates, it builds up heat inside the tar pot chamber, speeding up the melting of the tar.

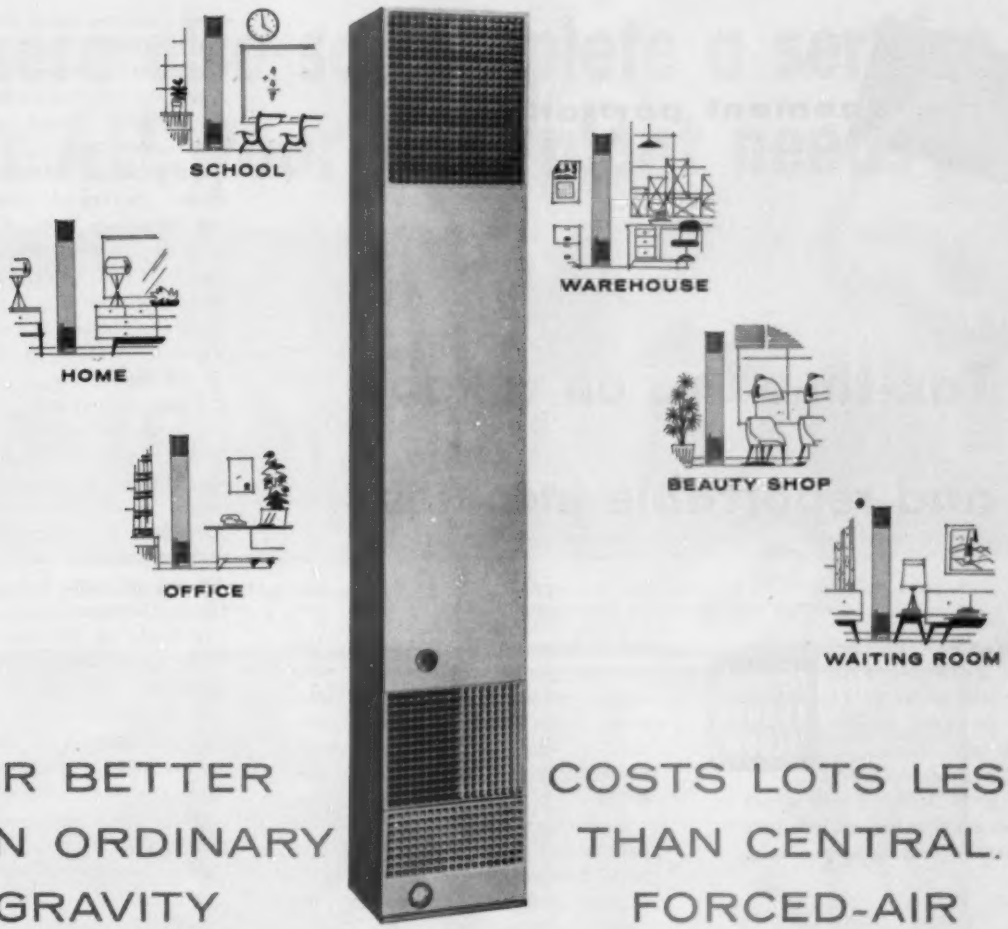
He also incorporated in it a safety device to prevent possible human failures. Workmen are always looking for a short cut, Long believes. In early operations with the piping used for tar pot burners, the workmen when finished would cut the fuel off at the most convenient point, usually at the control valve nearest the flame. This would then leave liquid and/or vapor in the line between the LPG cylinder and the torch.

At the valve atop the cylinder, Long installed a POL connection with a built-in excess flow device. Should a surge come into the valve, it would jam a ball in the valve against the far side of the valve opening, thereby closing off the flow of gas.

In addition, the valve nearest the torch is so designed that it is impossible to shut off the gas there. A simple needle valve closes just so far, but not all the way, so that whatever gas remains in the line from the cylinder will be burned off. This prevents any gas from remaining in the line.

Between the torch and his growing industrial loads, Long's business operations have taken new directions. More and more emphasis is being placed on them. Industrial business is good business, and it's been extra good for John Long and Delaware Valley Propane Co.

A reprint of this article can be obtained by writing on company letterhead to the Editor, BUTANE-PROPANE News, 198 S. Alvarado St., Los Angeles 57, Calif.



FAR BETTER THAN ORDINARY GRAVITY WALL HEATERS

COSTS LOTS LESS THAN CENTRAL FORCED-AIR HEATING SYSTEMS

RIGHT IN THE MIDDLE WHERE THERE'S MONEY TO BE MADE

★ It's vented for safety. (Vent is concealed.) ★ Hides in the wall, takes no space at all. (Only 14″ wide by 10″ deep.) ★ You offer floor-level heat in one, two, or three directions. ★ Only a small grille shows on one side if you use fully-hidden installation method. ★ Installs simply—the simplest, by just putting it against a wall. ★ Offer a choice of single or two-speed models.

You can bet DAY & NIGHT has no special ax to grind in this area. DAY & NIGHT makes the best of both other types of heating equipment. But there's that fertile market in between where you can make a healthy profit. It's the market that won't settle for "just heat" in a merely adequate, low-cost unit—yet can't (or won't) pay for the long-run ductwork required by central forced-air systems. Where price is the prime consideration, you can sell the standard, single-speed model. The two-speed FA Panelray model should be your big seller. Its *normal* setting holds operation to a low flame, low speed level, stretching use of fuel and power over longer period for more even temperature. *High* setting allows burner and fan to respond to thermostat regulation for full-speed, full-flame operation.
It fits your middle market perfectly!

IT'S THE NEW

DAY & NIGHT 60 FA PANELRAY

For complete installation specifications, write to:

DAY & NIGHT MANUFACTURING COMPANY 855 ANAHEIM-PUENTE ROAD, LA PUENTE, CALIF.

Tax-time tips on taxable and reportable incomes

April 15th (the actual deadline this year will be the 17th) will be here sooner than you think. In this article, tax expert E. H. Mitchell tells which incomes are taxable and non-taxable, reportable and non-reportable.

COUNSEL AT YOUR ELBOW

WHEN MAKING OUT YOUR INCOME TAX RETURN, patience is a rewarding virtue. An honest taxpayer in a-hurry runs the risk of overpaying. This two-installment article is intended to help you "make haste slowly." Speed control pays dividends here as well as on the highway.

In minimizing income taxes, the two major elements are (1) exempt and excludable income and (2) deductions. The latter, which is the more fruitful, will be treated next month.

All types of taxable income are reportable, but all reportable income is not taxable. Some types of income are neither taxable nor reportable.

Taxable income

In general, taxable income consists of: compensation received for work or services, profits from a business or profession, dividends on stock, interest, rent, periodic alimony, receipts by estates, receipts from trusts, gains from the sale of property, gambling winnings, pensions for past services, most prizes that are accepted, annuities (to a limited extent), rewards, royalties, and forgiven debts.

Particular attention should be paid to all dividends received and to all interest received from banks, savings and loan associations, insurance companies, credit unions, bonds (both federal and corporate, but not municipal), and postal savings accounts. A single, unintentional omission could easily result in an audit of your return.

You must report *all* taxable income.

Non-taxable and non-reportable income

Most non-taxable income need not be reported. Check your 1960 receipts against the following list. It could save you money.

Bequests, legacies, gifts (except Christmas bonuses) and inheritances.

Accident and health insurance proceeds. Also casualty insurance proceeds for complete or partial destruction of property.

Interest on municipal bonds.

Sums received as damage resulting from personal injury, libel, slander, and breach of promise.

Veterans' disability compensation.

Proceeds of life insurance policies received upon the death of the insured.

Workmen's compensation.

Amounts received under both the Social Security and the Railroad Retirement acts.

Unemployment benefits received under railroad unemployment compensation laws, state unemployment compensation laws, and the Railroad Unemployment Insurance Act.

Veterans' bonuses and pensions whether received by the veteran or his family.

A minister's rental allowance or the rental value of his home.

A service man's allowance for subsistence, quarters, uniforms, meals and mustering-out pay.

Payments to dependents of military personnel.

All tax refunds, but not the interest thereon.

Dividends on life insurance policies upon which you pay the premiums, but not interest upon such dividends.

Scholarship and fellowship grants, including research grants from the American Heart Association, Inc., plus necessary expenses furnished.

Public assistance benefits paid from a general welfare fund.

Group, term, life insurance premiums paid by your employer.

Group hospitalization premiums, similarly paid, if not deducted from your wages or salary. (Your employer's contributions to a profit-sharing or pension plan are not taxable until finally distributed or made available to you.)

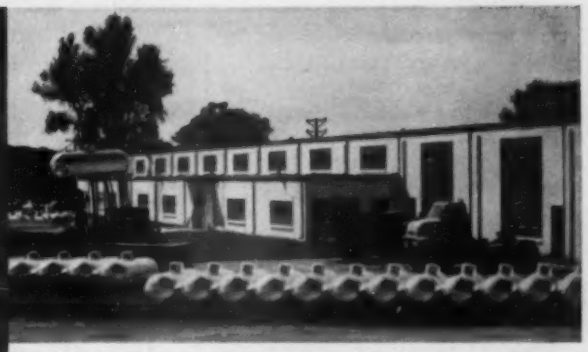
The value of goodwill Christmas gifts received from your employer, provided such gifts consist of food or merchandise of nominal value.

Courtesy and goodwill discounts on purchases from your employer, provided they are nominal in value, are offered to employees generally, and are not intended as additional compensation.

The value of lodging furnished you by your employer on his business premises, provided it is required and is furnished for his convenience. This is taxable to partners since they are not employees.

Where else so complete a service for ALL your bulk plant needs?

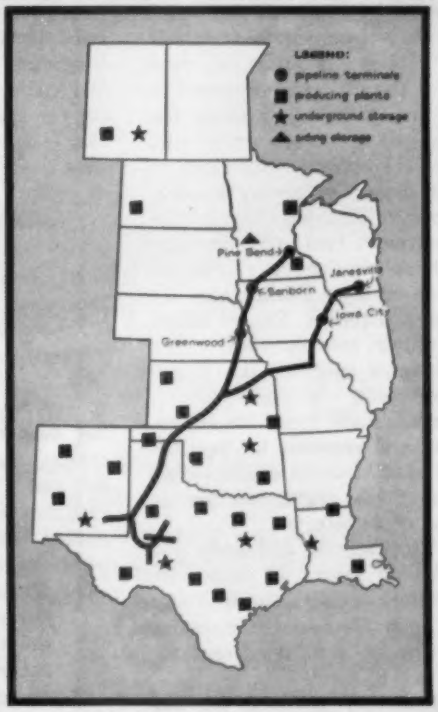
Best-quality NGAA-specification fuel, plus *assured* on-time delivery.



Complete warehouse stock of LP-Gas parts and equipment, for immediate service.

Complete line of "Topper" Systems, quality-built for lifetime service. New endmount systems available.

Engineering and technical services, including design and construction of complete bulk and standby plants.



And now United brings you

PIPELINE PROPANE

from the Mid-America line

UNITED PETROLEUM GAS COMPANY

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An allowance or reimbursement for moving expenses of yourself and family to another permanent place of employment, but to the extent only of the amount actually expended, and provided the move is "in the interest of your employer." This income exclusion covers the cost, also, of transporting household goods and personal effects.

Non-taxable but reportable income

The gain, if any, realized upon the sale of your residence, provided that within one year before or one year after such sale you buy and occupy another residence at a cost equal to or in excess of the adjusted sale price of the old one. Here the tax on the gain is postponed (not forgiven) until the last replacement residence is sold during a similar two year period. Careful records should be kept in order to establish the amount of the final gain, if any. Somewhat similar rules apply to other types of property, condemned or otherwise involuntarily converted into other property which is similar or related in service or use. These rules are varied and tricky. Expert advice is strongly recommended.

Endowment proceeds not in excess of cost.

Payments made by or for an employer and received by beneficiaries of a deceased employee because of his death, but not in excess of $5,000.

The first $50 of dividends you receive on stock. If your wife owns stock, either alone or jointly with you, she enjoys the same exclusion on a joint or separate return.

Compensation received for the whole period an employee is out of work due to injury, not in excess of $100 a week. This must be paid pursuant to the employer's wage or salary compensation plan. Partners are not eligible here. The same exclusion applies to employees out of work due to sickness, but it does not start until after the first 7 days of such sickness, unless hospitalized for at least one day. It must be paid under a similar plan.

Portions of annuities that were purchased by you. The amount of this exclusion is quite technical. You may need help.

If by a quick and careful check of above categories you find one or more types of non-taxable, 1960 income received by you (or by a member of your family or even by a friend), the time spent will not have been wasted. If none is found, you still enjoy the comfort of knowing definitely that you are not overstating your income. You will have crossed the first of two important hurdles.

We'll cross the more profitable hurdle, deductions, next month. ■

Here are the most important new changes in the Social Security Laws

MANAGEMENT HANDBOOK

Social Security benefits have been liberalized under recent amendments to the statutes. This article, prepared especially for BPN by the Social Security Administration, highlights the most important of the new provisions, and concludes with a plea to the employer for better reporting, in the interests of saving everyone time and trouble.

SOME MAJOR CHANGES and many minor changes in the Social Security Law were brought about by the recent 1960 amendments. Some of the most important are these:

First, benefits can now be paid to a disabled worker at any age. A severely disabled worker need not wait until age fifty to become entitled to cash benefits for himself and his dependents. The other requirements for eligibility to disability benefits are basically the same. An applicant must:

(1) Have worked for at least five years under social security in the 10-year period before he became disabled.

(2) Have a disability which prevents his doing any substantial gainful work.

(3) Have a disability that is not expected to improve in the foreseeable future.

If a person has been drawing social security payments as a severely disabled person, he can continue to get checks for 12 months, if he goes back to work. A decision on whether a disabled worker has regained his ability to work will not be made for nine months after he returns to work. Then, if he is found no longer disabled, he will get payments for three more months.

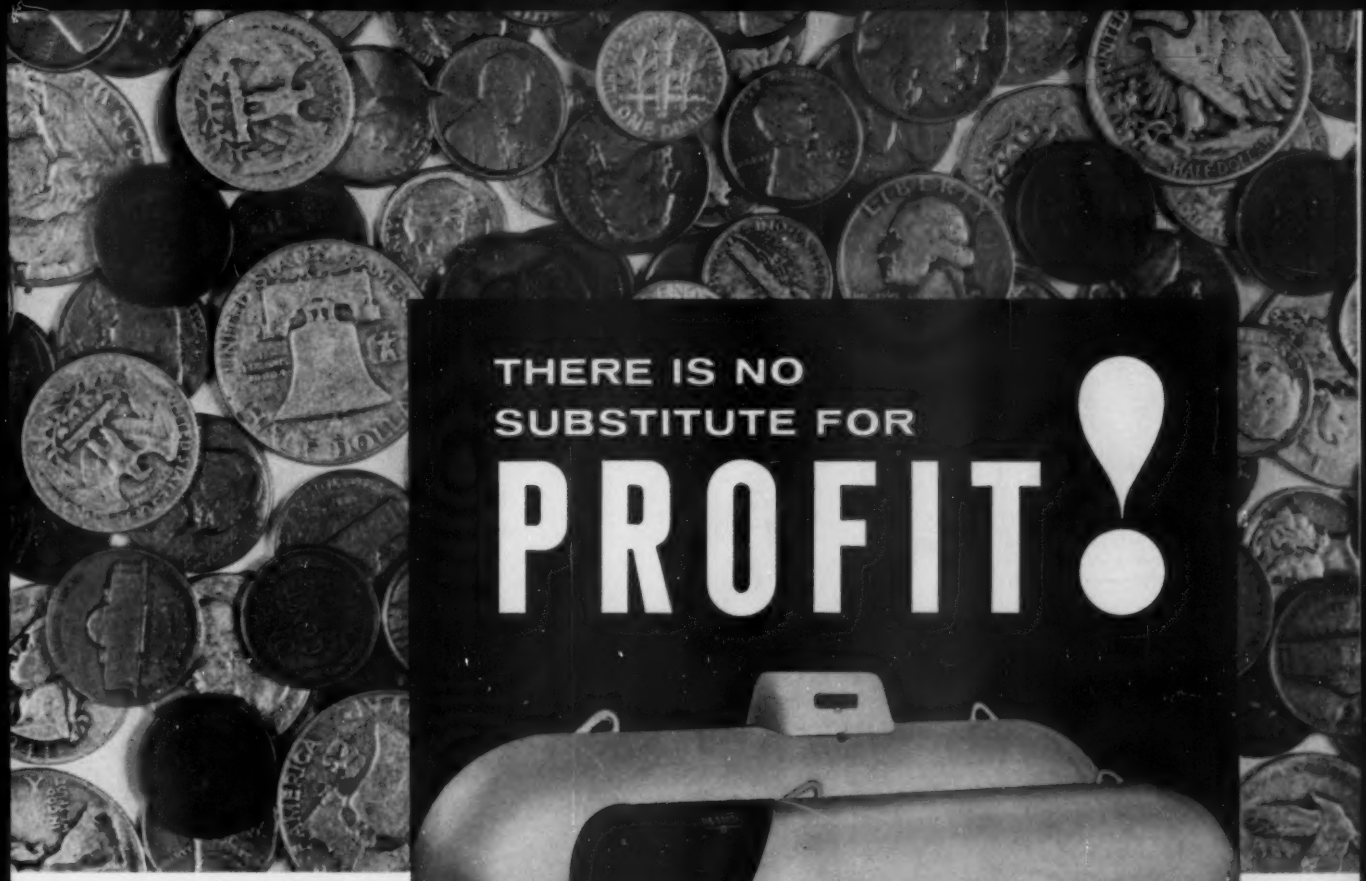
Also, if a disabled worker does regain his ability to work and, within five years, again becomes disabled, he will not have to wait six months to have his benefits start.

Second, beginning in 1961, most beneficiaries who work will have less benefits withheld.

The method used to determine the amount of benefits a beneficiary will be entitled to when he has excess earnings in a year has also been changed. A beneficiary who earns more than $1200 in a year will have $1 of his benefits withheld for each $2 that he earns over $1200 and under $1500. For every dollar his earnings go above $1500, he will lose one dollar of benefits.

For example, if a beneficiary is receiving a benefit of $113.00 per month, he would get some benefits even if he earns $2706.00 in a year. Under the old law he would have had to forfeit all of his social security checks. As before, a beneficiary who earns $1200, or less will get his benefits for all months of the year.

Third, the amount of work required to get benefits has been reduced. In order for you or your dependents to get benefits, you must have worked under social security for a certain period of time. Just how long depends upon your date of birth or, if you die, upon your date of death.



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ARKLA GASLITES
The most popular decorative and practical home improvement on today's market.

ARKLA GASIGNS
Sensational new high profit load builder. Modern designs for every business. A must for LP-Dealer signs.

CUNO AQUA-PURE WATER FILTERS
Crystal clear pure water for home and business

ARE YOU SATISFIED with the money you made last year? Like to increase your profits this year? You can as a Beaird LP-Gas dealer.

Here's why! As a Beaird dealer you don't have to go-it-alone. Beaird has a full-time sales organization ready to give you personal assistance the year 'round. These experienced LPG-men will help you to arrange long term financing of systems, transports, bob tails, filling stations and storage needs. Or help you train your personnel in the use of Beaird merchandising aids that will increase sales. You will also profit from a nationwide stocking program that puts millions of dollars worth of LP-Gas systems in local inventory points to reduce your costs.

And now . . . Beaird has added new lines of "hot" selling items your customers will want. These include the sensational Cuno Aqua-Pure Water Filter and the Arkla line of Gaslites and Gasigns. Put these fast selling "load building" products to work for you. Send for literature today.

For bigger profits . . . look into a Beaird dealership.

another AMF BEAIRD product

THE J. B. BEAIRD COMPANY, INC.
A Subsidiary of American Machine & Foundry Company
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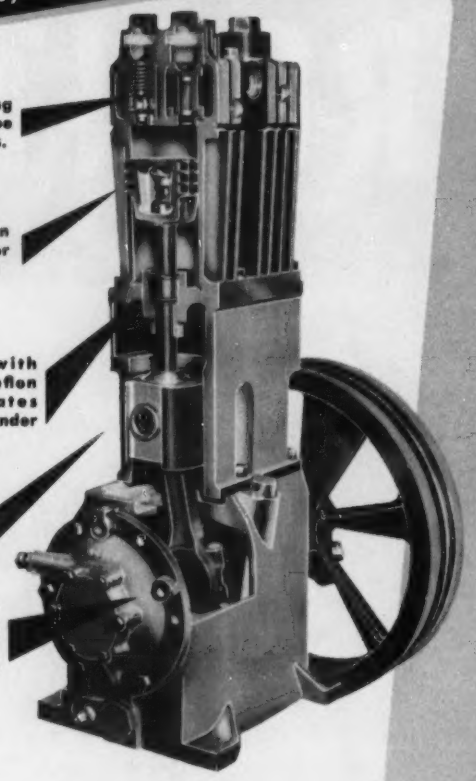
NO OIL CONTAMINATION WITH CORKEN "DRY CYLINDER" COMPRESSORS

Your product is protected by complete separation of cylinder and crankcase!



Quiet, long lasting cushioned disc-type alloy steel valves.

Carbon Piston Rings (No need for lubrication here!)

Stuffing box with chevron type Teflon packing separates compression cylinder from crankcase.

Crosshead guide.

Built-in oil pump for pressure lubricating all bearings in crankcase area.

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Available in 2 Sizes—Model 290 and New Larger 490

	290 RATINGS 490	
Max. Displacement (cfm)	16	36
Max. Differential Pressure (psig)	265	265

THERE'S A CORKEN DISTRIBUTOR NEAR YOU—

CORKEN'S INCORPORATED

PHONE CE 5-5517
P. O. BOX 1062
OKLAHOMA CITY, OKLA.

Retirement age (65 for men and 62 for women), or death	Will need this much work
1956 or earlier	1½ years
1957	2
1958	2¼
1959	2½
1960	3
1961	3¼
1962	3½
1963	4
1964	4¼
1965	4½
1966	5
1967	5¼
1968	5½
1969	6
1970	6¼
1971	6½
1972	7
1973	7¼
1974	7½
1975	8
1976	8¼
1977	8½
1978	9
1979	9¼
1980	9½
1981 or later	10

In comparison, a person under the old law would have needed 5 years of work under social security if he attained retirement age in the first half of 1961.

Older workers who did not meet the old requirement may now qualify for benefits. However, no one can qualify for benefits with less than a year-and-a-half of work under social security. Also, survivors of workers who died after June 1954 and were not eligible for benefits because the deceased had not worked long enough under social security may now be eligible for benefits.

There were many other changes as a result of the 1960 amendments. Your nearest social security office will answer any question you may have concerning these changes or supply you with informational pamphlets regarding these changes.

Employer Reporting

THE EMPLOYER CAN HELP HIMSELF a great deal when he prepares Form 941 (Employer Quarterly Federal Tax Return) by reporting completely and accurately. Incorrect reporting is the biggest single problem the Social Security offices have in the handling of this phase of the work.

Many times, for example, employees do not have their card

BULLETIN:

Shell stores millions of gallons of Propane in five enormous man-made caverns to promise you ready gas delivery all year round

Chopped and blasted from solid rock, Shell's Wood River, Illinois gas cavern holds 10 million gallons of Propane.

In the Southwest, three subterranean salt domes hold another 32 million gallons. All told, Shell has five such underground reservoirs—linked with a network of Propane producing plants.

This is how Shell assures its distributors an adequate supply even in busiest months—and helps them develop more profitable business.

AN ASSURED source of supply is an absolute "must" for any LP-Gas distributor who wants to make money.

That's why Shell backs up its distributors with one of the most carefully planned supply networks in the business.

Four facts give some idea of its scope—and significance to you.

Four important facts

(1) Shell draws Propane gas from a network of over 20 producing plants.

(2) Shell holds millions of gallons of Propane in reserve. Stored in mammoth, man-made caverns. These caverns, five in all, are strategically located to serve the areas where Shell Propane is sold.

(3) Shell has thousands of producing wells to draw from. Propane comes from petroleum and natural gas. And Shell's underground petroleum reserves are conservatively estimated in the millions of barrels.

(4) Through integrated pipelines, tank cars and transports, Shell can meet its distributors' needs anywhere in the U.S. or Canada. Shell distributors don't suffer from "shortage headaches."

Call your Shell Representative

These four facts help provide a solid framework for distributor profit. They show why Shell distributors *stay* with Shell—and why so many others are switching to Shell. One of our representatives will be glad to talk with you. Contact the nearest Shell office, or write: Shell Oil Company, 50 West 50th Street, New York 20, New York.

SHELL

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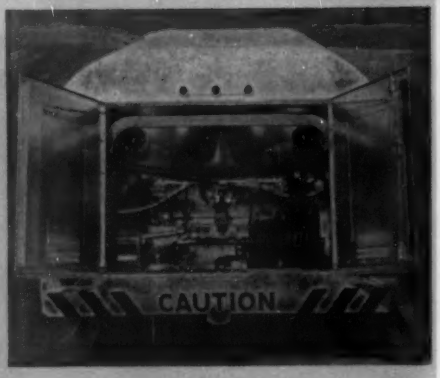
—where 1,997 scientists are working to provide better products for industry.

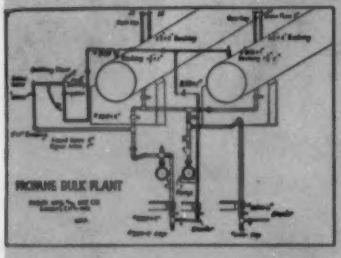
Your One Supplier with everything in L. P. gas and Anhydrous Ammonia Equipment

"The Loadmaster" LPG Truck Tank

SQS

PASLEY-DESIGNED Truck Tanks (see above and right) were first to feature all controls from one location. All operation is from one point—rear compartment.





BULK PLANTS Pasley LPG and Ammonia type installations — a turnkey job or engineering for your own installation. Write, wire or call.

Also a complete line of accessory equipment.

"Pastels By Pasley"

COLOR — The Modern Trend! Bring your LPG Equipment up to date. Available in the following colors . . . (write for information)

Blush Peach	Smoky Grey
Sunshine Yellow	Seafoam Blue
Mustard Lime	Wedgewood Green
Eureka Orchid	Rose Beige
Lake Blue	Desert Rose

SQS

"EVERYTHING IN LPG AND ANHYDROUS AMMONIA"

The Pasley Mfg. & Dist. Co.

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handy when they are hired, so give the number from memory. Often their memories are faulty. If the number is incorrect, the field office is obliged to go back to the employer to straighten the matter out.

Oftentimes, the employee will have been only a temporary one. By the time the inaccuracy becomes evident, he is already gone.

If the number is not available, the employer should show data from a temporary receipt which can be issued by the social security office where the employee files for a duplicate social security card. If either of these is unavailable, then he is required to attach to his tax return a Form SS-5 (Application for Social Security Account Number) prepared by the employee, or a statement containing the information asked for on the Form SS-5. If the employee is not available, the employer is required to fill out, sign and attach to his return a Form SS-5 and give an explanation as to why a Form SS-5 or statement signed by the employee was not secured.

As can easily be determined from the above, it is much easier to require that the employee show his actual social security account number card when he starts to work or have him file for a duplicate card immediately and obtain a receipt from the social security office for the files. This not only eliminates needless recontacts by the field office, but also shows the employer is conforming with the law. Any social security office will be glad to send an employer applications for duplicate social security cards.

Should an employer make an error when reporting an employee's social security number or name, he will receive a request from the Division of Accounting Operations, Baltimore, for the correct information. A prompt reply to their request will prevent a personal contact by someone from the social security office.

The one thing the employer should keep in mind is that better wage reporting practices will enable him to have a smoother and more economical operation. ■

BURROUGHS ACCOUNTING MACHINES END ON-THE-ROAD PAPERWORK . . . BOOST DRIVER STOPS 50%

The scene: Liberty, New York—home office of the Happy Cooking Metered Gas Service, LPG distributor-dealer with nine branches throughout the Northeast. **The job:** sales receipts and disbursements. **The equipment:** nine Burroughs Sensimatic Accounting Machines, one in each branch. **The results,** according to Controller Claude Blumenstock: "Before we installed this equipment, our drivers did their own basic accounting on the road. Now it's handled in the office where it belongs, with the result that our drivers are making 50% more stops. Each branch manager, as well as headquarters, now has an accurate total-sales figure at any time—plus an up-to-date and readily accesssible history record on each customer. We've achieved all this with no increase in personnel, and with the elimination of tight time schedules and long hours of overtime."

Burroughs and Sensimatic—TM's

Controller
Claude Blumenstock

Happy Cooking Metered Gas Service is one of many LPG distributor-dealers helped to new accounting efficiency by Burroughs office automation equipment. For details, action—and results—call our nearby branch now. Or write Burroughs Corporation, Detroit 32, Michigan.

Burroughs Corporation

"NEW DIMENSIONS / in electronics and data processing systems"

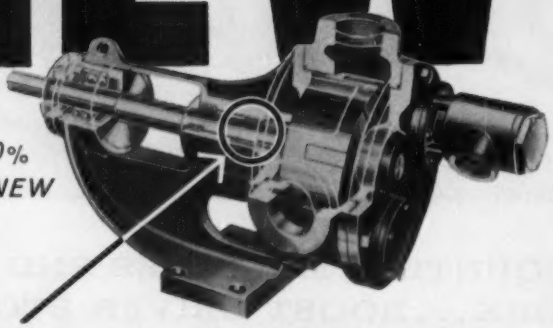
BPN ASSOCIATIONS

Massey elected chairman of ASA Standards Council

Harold Massey, managing director of Gas Appliance Manufacturers Assn., has been elected chairman of the ASA Standards Council. E. O. Mattocks, director of technical services of American Petroleum Institute, was named vice chairman. The Council has the responsibility for guiding the voluntary national standards program being conducted under the association's procedures for standardization.

Massey and Mattocks have been active for many years in standardization through the gas appliance and petroleum industries' participation in ASA.

NEW



Step up delivery as much as 100% with Viking's NEW 260U LP-Gas Truck pump

VIKING'S new needle bearing-equipped LP-Gas truck pump can be operated at speeds up to 700 R. P. M. And it will deliver up to 80 G. P. M. at 50 P. S. I. Pump comes equipped with 2½-inch ports and, when connected to sufficiently large inlet lines and fittings, this full rated capacity is assured.

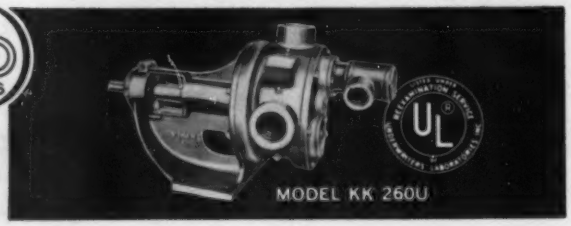
Yes, you can step up delivery schedules, saving time and money, with the Viking 260U LP-Gas pump. It will soon pay for itself, many times over, so act now!

For complete information, send today for folder SP-5278

VIKING PUMP COMPANY

Cedar Falls, Iowa, U.S.A. In Canada, It's "Roto-King" Pumps
See Our Catalog Unit In Butane Propane Catalog

50 YEARS



LPGA invites heads of major companies to show

The Liquefied Petroleum Gas Association has invited the chief executives of the major LPG-producing companies to attend the four-day meeting and trade show to be held April 30—May 3, at the Conrad Hilton Hotel, Chicago.

The emphasis on producer executives' attendance is linked to LPGA's 1961 theme, "Spotlight on Potential."

Highlights of the meeting include Frank M. Porter, president of API, as keynote speaker and the president's annual report, along with forums in five departments of LPG-marketing: general management, plant operations, sales promotion, tax accounting, and loan building. These sessions attract LPG people whose daily duties bring them in touch with one or more of these specialties.

Compressed Gas Association elects new officers

At the recent 48th annual meeting of the Compressed Gas Association, held at the Waldorf-Astoria Hotel in New York, the following were elected to office: D. M. Horner, president of Harrisburg Steel and Taylor-Wharton Co. (divisions of Harsco Corp.), president; R. S. Passmore, manager of the ammonia division of Armour Industrial Chemical Co., vice president; and R. L. Swope, vice president of Southern Oxygen Co., vice president. Franklin R. Fetherston was re-elected secretary-treasurer of the association.

R. A. Carver elected president of Arkansas LPGA

Officers of the Arkansas Liquefied Petroleum Gas Association, recently elected, include: R. A. Carver of Mena, president; M. O. Rasberry of Helena, vice president; Cy Carney, Jr. of Fayetteville, vice president; and Larry Linder of North Little Rock, secretary.

Humble Oil head will act as PR chairman of NAM

William Naden, executive vice president of the Humble Oil and Refining Co., Houston, will serve as chairman of the public relations advisory committee for the National Association of Manufacturers.

DRAMATIC

The fabulous GAS "400"

MODERN STYLING COMBINES THE SMART APPROACH TO NEW COOKING CONVENIENCE

Here's a range that creates excitement wherever it's seen! And it's so practical for modern cooking requirements because everything is where it should be. Four Sizzle 'N Simmer burners, exclusive with Tappan, one Set 'N Forget thermostatically controlled burner and handy cutting board slide out of the way when not in use. Visualite chrome-lined oven and accompanying broiler are at reach-in, see-in height. All controls are at eye-level away from harm's reach. All of this plus automatic cooking-oven, roast control, convenience outlet and Set 'N Forget. Easily installed at the proper height for the homemaker. Available soon for LP gas.

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...YET IT'S A COMPLETE LP-GAS METERING SYSTEM IN ONE SPACE-SAVING UNIT

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for a better measure of profit

The Neptune LP-gas truck meter is the only meter with all accessories built-in so compactly . . . a complete, accurate system that requires only *three* connections to install, takes space a little larger than this magazine.

In one assembly you get the most reliable meter built, vapor release, strainer, pressure relief valve, inlet check valve, differential valve, and vent line check valve. Plus a ticket-printer. All units are designed to work together as one integrated and compact package. Always easy on your pumps.

Most important, all elements are *designed, built, assembled, and calibrated as one unit by Neptune.*

Add to this Neptune's fine reputation for sustained accuracy and low maintenance, and you have the LP-gas man's most sought-after business friend.

All sizes. Backed by nation-wide network of Neptune-operated service centers. Your Neptune jobber or tank truck builder will be glad to supply details.

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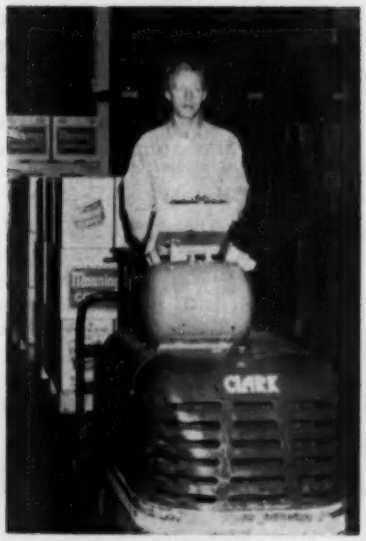
LIQUID METER DIVISION

Indoors as well as out, LPG burns clean*



Carbon monoxide is the most fearsome ingredient of indoor air pollution. Here's proof that LPG exhausts are almost wholly free of this dangerous pollutant.

The "inside story" on air pollution

A BPN Exclusive

WE GENERALLY THINK OF AIR POLLUTION as a problem peculiar to the outdoors. But it's just as serious indoors, as people who work in warehouses and other enclosed spaces will tell you.

The same products of combustion are present inside as out. You won't get the same type of "smog" as you will outside, since there is no sunlight present to bring about the needed photo-chemical reaction. But you will find the same effect that temperature inversion gives you—that is, you have a roof over the atmosphere to keep it from rising, and there is insufficient air movement to provide the optimum in ventilation.

Indoors, the products of combustion are just as irritating, if not more so; and they are much more dangerous.

It is indoors that LPG has proved itself most valuable in curbing air pollution to a point where it is neither discomforting or dangerous.

Indoors, as out, gasoline engines give off a full range of products of incomplete combustion. The exhaust gases of which we spoke last month are as surely present indoors as out. Some attack the eyes and nose. Though they don't turn to "smog," they can tinge the air and cause extreme unpleasantness. And, worst of all, they may contain a fairly high concentration of the deadly killer, carbon monoxide.

CO is given off by the incomplete combustion of anything containing carbon—coal, petroleum products, natural gas, charcoal, etc.[1] Even LPG. But as with any poison, it is the concentration that counts. And this concentration depends directly upon how completely—or incompletely—the substance burns.

LPG, as is well known, burns clean. It requires no hot spots in the manifold for vaporization; it enters the combustion chamber dry, completely vaporized. Combustion is virtually complete. Carbon residues do not build up in the combustion chamber. Propane does not wash down the cylinder walls as gasoline does.

This washing action hastens engine wear. The unburned residue of gasoline is composed of the heavier ends, in the kerosene range. They dilute the oil in the crankcase, sometimes by as much as 10 to 14 per cent within a single month's operation. The oil then acts as an abrasive rather than a lubricant.

As an engine wears, the production of unburned products increases. Therefore, the greater the age of a gasoline engine, the greater the output of unburned products.

With LPG, the increase over the life of the engine is minimized because of negligible engine wear.

Millions of miles of operation, thousands of hours of service on LPG-fueled engines have substantiated this fact of clean burning. The story of the superiority of LPG over gasoline on this score has been told many times,[2] and need not be repeated here.

However, the evidence on engine wear, overwhelming as it is, does not in itself completely prove that what comes out of an LPG-engine

* See "How LPG Fights Air Pollution," February BPN.

exhaust is less deadly than what comes out of a gasoline-engine exhaust. We must look for documentation of this claim to back up our story.

It can be found. One source shows evidence that a well-tuned gasoline engine emits up to 15 times as much carbon monoxide as a similarly well-tuned LPG engine. Tests made by the Environmental Research Laboratory of the University of Washington showed that, in the Laboratory's own words, "There is no doubt that a properly adjusted propane-powered engine emits much less CO than a gasoline engine in good condition.

"Tests show that a well-tuned propane engine discharges *less* (italics ours) than 0.1 per cent (less than 1000 ppm) of CO, while a well-tuned gasoline engine will run 1.5 per cent (15,000 ppm) under the same conditions. The *average* (italics ours) value for CO discharge from gasoline engines varies from 5 to 9 per cent, and this represents the typical values rather than the exceptions."

The Michigan Department of Health also reports on some tests, made in 1957. A Buda fork lift, factory-equipped with propane, gave off 0.3 per cent (3000 ppm) both at idle and under load. The best gasoline performer registered 1.8 per cent at idle and 0.3 per cent under load. Other lifts operating on gasoline gave off as much as 2.7 per cent at idle and 3.0 under load.

Another pollutant, as we mentioned last month, is NO_2 (nitrous oxide). Here again, in measuring discharge of the two fuels' exhausts, propane came out the winner. One converted machine produced 11.0 ppm, while two gasoline engines gave off 46.0 ppm, another 31.0, and a fourth 11.0.

It is interesting to note the rather wide discrepancies in CO production between factory-equipped LPG trucks and converted jobs. The condition of the vehicles before conversion is not described. Might this have had a bearing on results?

Nearly five years ago, Ford Motor Co., which had virtually standardized on LPG for its fork lifts (except in a few locations where either it was uneconomic or not feasible to use), released results of laboratory and field tests. Burrell tests showed the CO content of propane exhaust gases was "at least" 50 per cent lower than with gasoline. Quoting from an article in "Flow" magazine, May 1956:

"The content ran from 0.0 to 2.0 per cent when propane was used throughout the operating range of 1400 to 1800 rpm, and from no load to full load. At Ford, the normal for gasoline engines is about 3 per cent. Minor malfunctions such as defective choke, float, dirty jets or air passages were found to increase this percentage to 10-15 per cent."

Anticipating those skeptics who might scoff at 5-year-old tests, and question whether propane-powered vehicles would be able to maintain such performance standards, we asked Ford officials how they feel about LPG today. Replied J. C. Radcliffe, supervisor of the industrial safety section of the employee programs department:

"The Ford program has not been modified to any large degree . . . Carbon monoxide is not a problem when propane fork lifts are used."

Parenthetically, Ford, like others, has found that reduction in CO emissions is only one facet of the indoor air pollution problem. Said the "Flow" article:

"With the operation of LPG-powered trucks, no visible smoke is emitted from the tailpipe. Half the battle with complaints on engine-powered trucks, Ford materials handling men believe, is caused by people seeing smoke come out of the tailpipe. They immediately think it is harmful, whereas the actual carbon monoxide content may be negligible."

Thus it can be seen that, as with air pollution outdoors, the problem is not simply the production of one single pollutant. Carbon monoxide is the dangerous pollutant; but smokes and nauseating smells also constitute a problem. The fact that what offends the nose and attacks the eye is also a pollutant is established once again. In other words, at Ford, the reduction of CO alone is not enough. With propane, the company has also been able to reduce the obvious and visible pollutants, making their warehouses pleasanter and more healthful places to work. Employee relations have improved accordingly.

Considering once again the No. 1 problem, carbon monoxide emissions: In our research, we attempted to get evidence from current, or at least running, tests on production of the gas from propane fork lift trucks. Such evidence is hard to find, simply because LPG has proved so satisfactory. Ford, for example, discontinued testing after a period of five years because it had become pointless.

Ford was using the "colorimetric" test, which employs a device manufactured by Mine Safety Appliances Co. It consists of a bulb and a replaceable clear glass indicator tube, suitably mounted in a holder. The tube contains a yellow silica gel, impregnated with a complex silico-molybdate compound and catalyzed by means of palladium sulfate.

In use, the sealed ends of the tube are snapped off and it is placed in the tube holder. The assembly is then exposed in the atmosphere while the engine is running, and a sample of the exhaust gases is drawn into the tube.

The presence of carbon monoxide in the tube will discolor the yellow gel, turning it green. The more CO, the darker the shade of green. The shade is compared with a color scale built into the holder.

The test is extremely sensitive. A concentration of only .001 per cent (100 ppm) will discolor the silica gel.

Rees Williams, safety engineer at the Ford-Mercury assembly plant in Los Angeles, conducted the tests in an enclosed box car, with only one door open. Since there was no draft, any pollutants discharged into the air would tend to remain there. As to results of the tests, he says:

"In all the tests we ran over about a five-year period, we had only one or two cases where there was any evidence of CO in fork lifts fueled with propane. And these did not exceed .02 per cent (200 ppm)."

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GREAT NEW COMPONENTS FOR ZENITH LP FUEL SYSTEMS

1 ZENITH PRESSURE CARBURETOR

Greater safety and efficiency in fuel control are built into this new Zenith® LP carburetor. In its development, our engineers drew upon their wide experience in other fields of carburetion—particularly aircraft pressure carburetion, where Bendix patents exist. The new LP models offer many advanced features: Both fuel economizer and final regulator are built in. The carburetors are fully balanced, can have fixed or adjustable fuel metering, and are simple to service. Two sizes available: 1″ S.A.E. (Model PC 1-8) and 1¼″ S.A.E. (Model PC 1-10).

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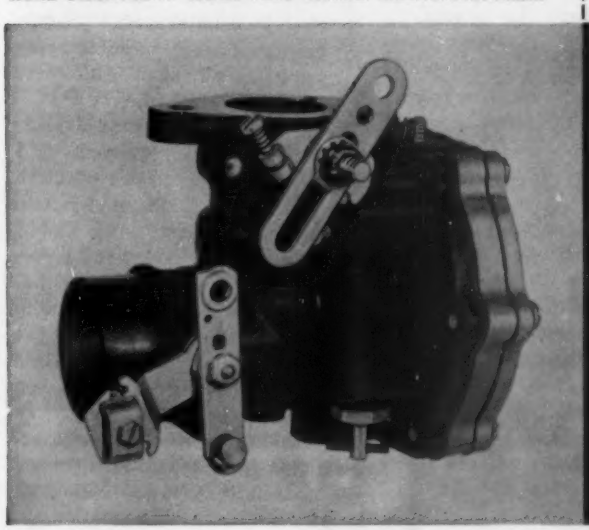
As the high-performance companion to the new pressure carburetor, we have designed a new hose line vaporizer. It mounts in any position in upper or lower radiator hose. For additional capacity on large engines, vaporizers can be mounted in both hoses. The unit, including the head, is cast from aluminum for light weight. The casting includes a pad for bracket or brace support in mounting.



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LP conversions of John Deere and MM-"U" tractors result in more power and performance with Johnson Vanasil Pistons. Newly patented Vanasil amazingly combines the hardness of cast iron with the lightness of aluminum. Precision Johnson machining and engine "know-how" keeps pistons snug without sticking. Tractor vibration is kept *low* . . . stalling *eliminated* . . . pick-up *increased.*

For John Deere A, G, "50", "60" and "70"... also Minneapolis-Moline "U". Johnson Aluminum Pistons are available for John Deere A, B, D, G and H models

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—also International and Chevrolet trucks.

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JOHNSON MACHINE SHOP
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Air pollution

In its literature, M S A states that headaches, dullness, physical loginess *start* at a concentration of .02 per cent. Thus, even the CO production of the poorest performers in the Ford test would have produced *no* effects on humans who were exposed.

The Ford tests were conducted under severe conditions. Ordinarily, even an enclosed plant would not have the almost total lack of ventilation characteristic of a boxcar. Furthermore, a concentration of .02 per cent will not have any effect upon humans unless they are constantly exposed to it for an hour-and-a-half. The in-and-out movement of the fork lifts would preclude this.

Williams, incidentally, instigated the changeover to LPG at Ford plants, which is now nationwide. At the time (1953), he was employed at the Long Beach, Calif. plant. As a means of expediting handling of cargo, the company had adopted palletizing of loads. With this system, fork lifts would pick up parts-laden pallets and transport them as a unit right into (or out of) boxcars. This was the first time fork lifts had been required to operate into the cars, and he was concerned about the production of CO.

Ultimately, following some trial runs, all fork lifts (with the few exceptions previously mentioned) were converted. Every piece of new equipment is now propane-equipped.

Another LPG booster is Ed Windsor, safety engineer at Lever Brothers Co., Los Angeles. This Lever facility now has 15 units on propane, none on gasoline.

Lever Brothers became interested in propane when it learned of the experiences of Certified Grocers of California, a neighboring concern. Certified switched to LPG in the early '50s to cure a serious air polution problem. An investigation of Certified's exceptional results by Windsor and other company officials led to the decision to convert their own units.

MSA colorimetric tests were conducted on both the gasoline and the converted models. Gasoline exhausts measured as high as 1000 ppm (0.1 per cent). Converted to propane, they registered between 200 and 300 ppm (0.02 to 0.03 per cent).

Since then, as old pieces of equipment have been retired, they have been replaced with new propane units. Tests with these machines have yielded readings of less than 100 ppm (0.01 per cent).

These case histories are typical, not exceptional. What distinguished them enough to make them worth singling out is that in each one, tests were made to determine CO production. All gave LPG an exceptionally good rating. They stand as proof, we think, that propane not only does not produce visible exhausts, which offend the eye, or malodorous exhausts, which attack the nose and bring on nausea; it does not produce carbon monoxide in measurable amounts.

No other combustion fuel can make all these claims. ■

Water heaters

(*Continued from page 55*)

nation's after-taxes income will also rise this year.

- *Gas* water heaters are getting better and better. Far from talking about discontinuing water heaters — as are their electric counterparts — some gas appliance manufacturers are going all out to make their products even better.

As an example, take Bryant Manufacturing Co., which completed a $7½ million water heater plant in 1959. As this is being written, Bryant is introducing a new line of heaters via a color and sound movie strip (to the trade) and new displays, newspaper ads, and radio and television commercials (to the public). Bryant confidently feels this line will usher in "a new era in the water heater business." In this era, profits would be up because tank failures and field service will be drastically down. New tank design features, new production operations, and a new glass formula are all expected to contribute to this millenium.

You are in partial control of the water heater market in your marketing area. You can increase that control by increasing your merchandising efforts. Contact your manufacturer to see what promotional material is available. Get it and use it.

There is no better time to act than right now. February has been AGA's merchandising month for water heaters. For the past 28 days, the association has focused its promotional efforts on one appliance—the water heater. The nation, including your market area, has been softening up, pre-conditioned for you. Take advantage of that fact and of the AGA promotional material the kilowatters admit is better than theirs! The AGA has water heater displays, ad mats, and bill boards. Get some of this material working for you and close in on your water heater prospects. Hit the kilowatters while they're on the run! ■

Clothes dryers

(*Continued from page 52*)

legitimate design improvements and additions can be made with sufficient frequency to out-date older machines long before they are worn out—and without relying on the styling changes of "dynamic obsolescence."

• *Gas* dryers, perhaps more than any other gas appliance, fit into the "let's-live-better" image American advertising has worked so hard to create in recent years. No other gas appliance can bring about such a dramatic change in a housewife's life—taking her away from back-breaking hours in the cold, windy back yard or the cold, damp basement.

Undeniably, the end of the year is the big dryer-selling season. Yet, the AGA just completed its big dryer push; January was dryer merchandising month. So, the nation's housewives (and husbands) have recently heard a lot about dryers. And they still have the chill March winds to face—hanging clothes in the back yard. Why not get going on dryers now? You'll be ready for that year-end push with a lot of dryer sales already on your sales chart. ■

A. H. SEEBOLD REPORTS...
"INCREASE DELIVERY RATE 20%
WITH CENTURY LP-GAS CARBURETION"

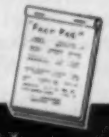
A. H. SEEBOLD, PRESIDENT—A. H. SEEBOLD TRUCK SERVICE & EXCAVATING COMPANY
GRANITE CITY, ILLINOIS REPORTS...

"since May of 1959, we have purchased four Blaw-Knox M55 six-yard mixers with Century LP-Gas Carburetion installations as factory equipment.

Every phase of our operation has improved. The tremendous difference in maintenance requirements is summed up by the fact that each month our four LP-gas mixers have consistently delivered 20% more cubic yards of concrete than comparable gasoline operated vehicles. This is due to the fact that our LP-gas vehicles are not tied up in the maintenance garage. Plugs last longer, less frequent oil changes, no major breakdowns and our drivers report extremely smooth operation especially on the mixer engines.

We have a complete conversion and original equipment purchase plan that will eventually make us a complete Century LP-Gas operation."

SEND FOR THE CENTURY "FACT PAC" GIVES MORE DETAILS... OTHER CASE HISTORIES.
Insist on complete Century LP-Gas carburetion systems for top performance.



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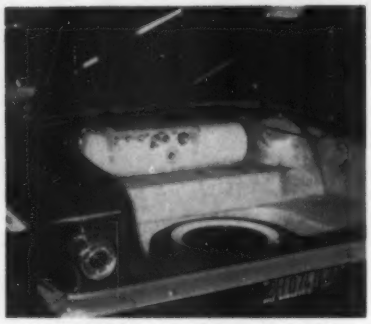
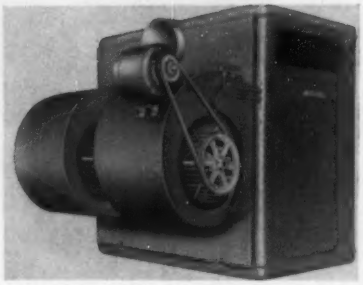


New manifold type tanks available for 1961 autos

Circle 1 on Readers' Service Card

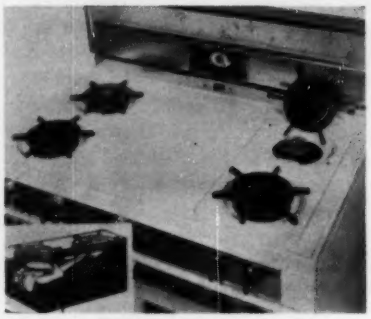
A 24-gal 10-in. diameter manifold tank has been designed to be mounted on the shelf of the 1961 Chevrolet trunk. An alternate type is a standard 26-gal tank with brackets, which mounts in the floor recess. A complete list of the tanks is available upon request (GEC 100). Manchester Tank & Equipment Co.



Horsepower reduced with dual blower system

Circle 3 on Readers' Service Card

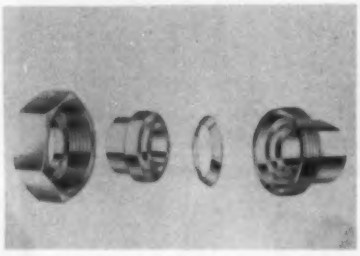
New dual blower system for unit heaters and modular duct systems is powered by a single ½-hp motor, with the blowers mounted on common drive shaft. Horsepower requirement is reduced, and single drive shaft assures even inlet air flow, improving efficiency (GEC 050). Reznor Manufacturing Co.



Spill-proof gas range grate has been engineered

Circle 5 on Readers' Service Card

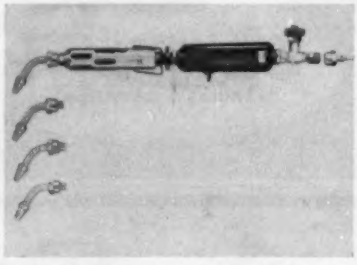
A new spill-proof gas range grate (GEC 240) has been engineered to protect the top of the burner. In addition, the flash tubes are protected from spill-overs, and will even continue to light under extreme conditions. The grate is made of cast iron with two coats of finished porcelain. Hardwick Stove.



Pipe fitting is made for small diameter sizes

Circle 2 on Readers' Service Card

A new type of tube and pipe fitting for small diameter sizes from ⅛ to 1 in. has been developed. This all-metal fitting assures dependable sealing without leakage on application with temperatures ranging from a minus 450° F to a plus 1500° F and pressures up to 16,000 psig. (GEC 370). Aeroquip Corp.



Welding torch can be used for thermoplastic materials

Circle 4 on Readers' Service Card

A new welding torch, developed for thermoplastic materials, polyvinylcloride, etc., (GEC 780) works with exhaust gases of the burner itself. No additional supply of compressed air is needed. Working pressure is a minimum of 14 psi and consumption is 2½ lbs of propane for 40 hr work. Rexo-Therm Inc.

Desk-top radio designed for easy installation

Circle 6 on Readers' Service Card

The new table-top two-way radio has been designed for easy installation on a desk without taking up valuable space. The new unit (GEC 140) weighs under 40 lbs, is 15 in. long, 18 in. wide and less than 9 in. high. The radio is constructed for operation in the 25-54 mc frequency band. Motorola Inc.

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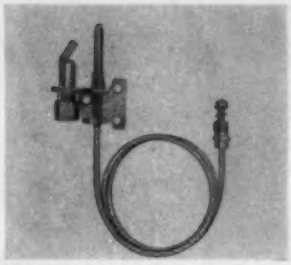


Water-heater pilot is combination of two systems

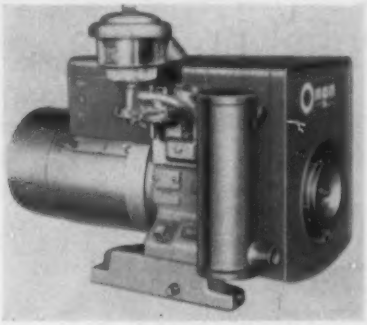
Circle 7 on Readers' Service Card

A new pilot for water heaters combines the features of incinerator and target-type pilots. The "CinTarg" (GEC 190) provides superior flame stability and non-linting characteristics. It has no shutters, lint screens, or supplementary shields which require assembly or adjustment. Robertshaw-Fulton Controls Co.

Burner melts chocolate, will not burn paper

Circle 8 on Readers' Service Card

The new "obedient burner," available on Universal gas ranges, melts chocolate in wax paper without burning the paper. The throat of the burner (GEC 240) is porcelain-covered steel and the burner head is a one-piece iron casting. This construction automatically positions the burner for correct ignition from the pilot. Waste King.



Series of 3600 RPM units available in two outputs

Circle 10 on Readers' Service Card

Model 205AJ-1R30 and 205AJ-3R30 providing 2500 watts, to be used in a new standby electric generating plant, are both gas driven. The single-cylinder, 4-cycle, air-cooled engine is directly connected to the 2500 watt (GEC 340). Extremely compact, this smooth running plant contains the usual extras. ONAN Division of Studebaker-Packard Corp.

Gas water heaters have silent gas burners

Circle 11 on Readers' Service Card

A complete new line of gas water heaters contains a new silent gas burner (GEC860). The burner is also more efficient, strongly constructed, and securely mounted. It can easily and quickly be converted to use either natural or LPG. Republic-Transcon Industries, Inc.

2-speed "Dualheet" wall furnace is produced

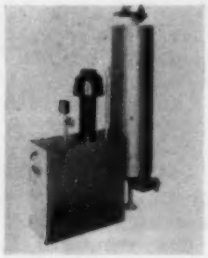
Circle 13 on Readers' Service Card

A new 60,000 Btu recessed-type wall furnace is now being produced. The furnace (GEC 420) contains a "dualheet" control system permitting low speed blower and burner operation for normal heating requirements and a high speed adjustment for full capacity. The Payne Company.

Venting components for dryers are now available

Circle 14 on Readers' Service Card

Flex-Vent parts for venting clothes dryers are now available. These include flameproof flexible tubing and weatherproof all-aluminum ducting, all-aluminum vent hoods with no-freeze damper, transparent plastic window plates, aluminum window plates and adjustable window plates for temporary installations (GEC 840). Flexible Tubing Corp.



Hydronic system provides heater with smaller boilers

Circle 9 on Readers' Service Card

Heat and domestic hot water with much smaller boilers are now possible with a new hydronic system (GEC 860) which houses the coil in the expansion tank. Domestic hot water is assured with input ratings of 50,000 Btu per hr as opposed to 125,000 ratings required by boilers with conventional built-in coils. Hydrotherm, Inc.

Heating unit used for pig brooding systems

Circle 12 on Readers' Service Card

An infra-red gas-fired heating unit is used in pig brooding systems and for general utility farm use. It is claimed that the unit (GEC 001) operates at about one-fourth the cost of electric heat lamps and half that of conventional gas warmers. Nutrena Feeds.

Incinerators incorporate fire-brick material

Circle 15 on Readers' Service Card

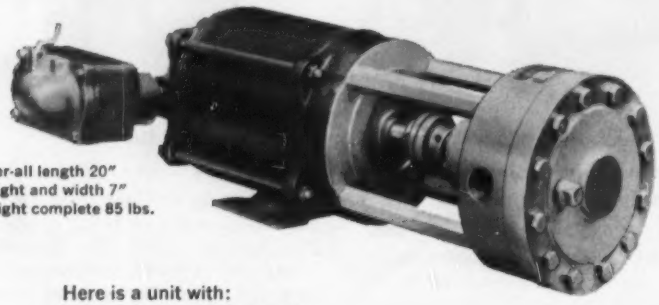
A new line of automatic gas disposers has been announced. The new line (GEC 440) consists of three models, all incorporating new ceramic lining in the secondary combustion chamber. The fire-brick material has proven extremely efficient. Finishes are in coppertone, metallic blue and white silicone baked enamel. Calcinator Corp.

7 GPM (10 GPM with vapor line)

SMITH EC - 1

at 75 p.s.i. differential pressure

(twice the delivery rate of competitive pumps of this size)



Over-all length 20"
Height and width 7"
Weight complete 85 lbs.

Here is a unit with:

- Low cost
- Fastest filling rate
- Built-in-features for easy installation
- Rugged construction— Underwriters approval

Fills small tanks as fast as any larger pump.

Has:

- Built-in strainer
- Built-in 2-way bypass valve
- ¾ HP Continuous-duty motor with Switch, Conduit Box, Thermal overload protection

Save on FIRST COST, INSTALLATION COST, FASTER FILLING

OTHER SMALL MODELS:
E C -H for slightly higher delivery rate—15 GPM Has same features as the E C -1
E G -1 even lower cost than the E C -1, for use in intermittent-duty service.

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New products

Refrigerators for travel trailers are introduced

Circle 16 on Readers' Service Card

An all new line of refrigerators for travel trailers has been constructed with spacious facilities. The entire box is being made of corrosion resistant aluminum panels sandwiching foam plastic between the internal and external walls. (GEC 690). This development prevents a minimum of insulation because of the high integrity of the foam plastic. Norcold Inc.

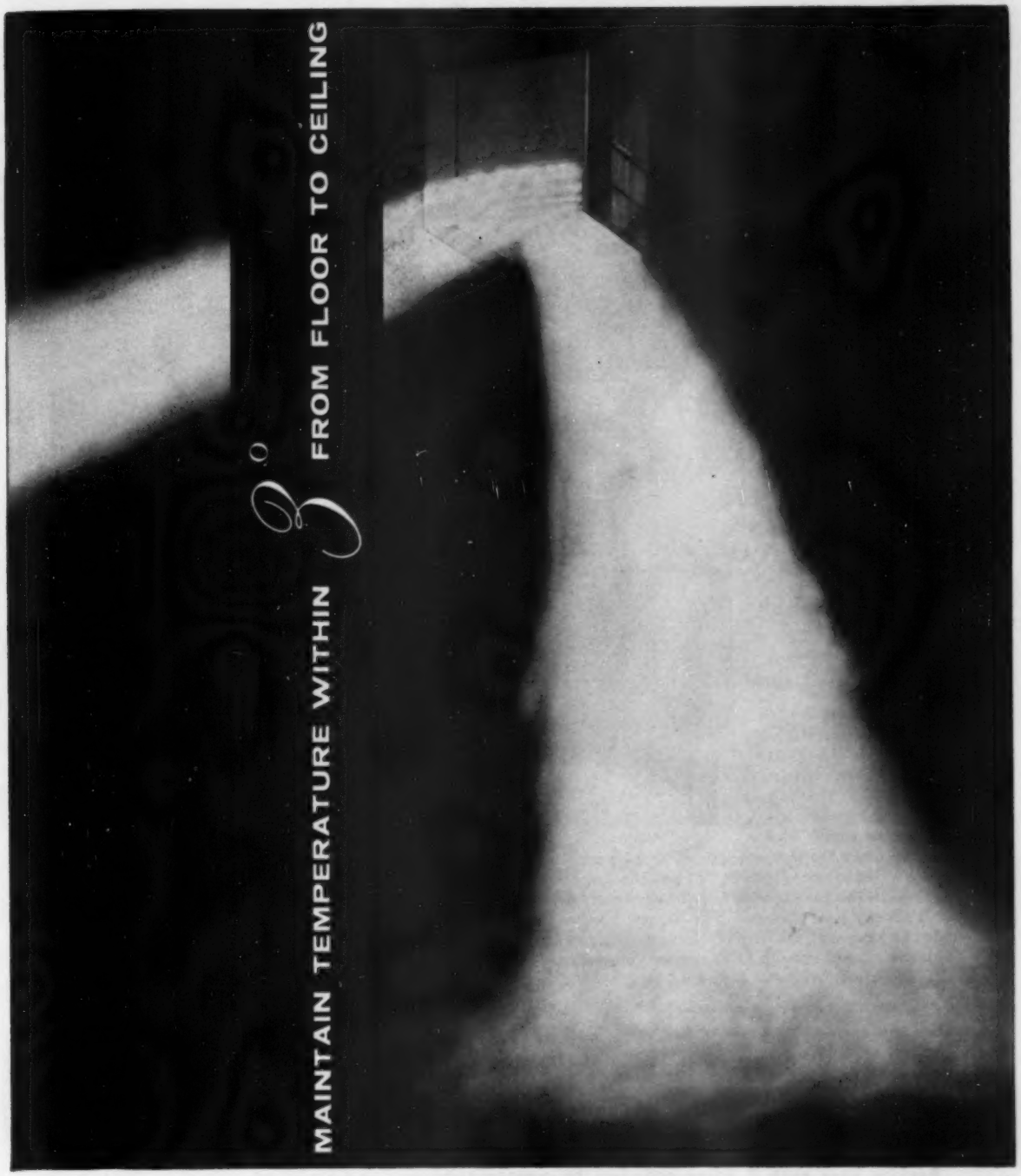
Single unit heating-cooling system developed

Circle 17 on Readers' Service Card

A new packaged hot water system for apartment houses and motels saves 30 per cent space, 65 per cent of pool heater costs. It also eliminates excessive piping and venting by furnishing hot water for domestic use, hot water for hydronics central heating, and pool water heating. The system is engineered for any size apartment house and motel. It is supplied with a full range of boilers up to 2,400,000 Btu and with hot water storage tanks ranging from 120 to 10,000 gal.

Only one vent, gas line, and water main are needed for installation (GEC 860). The system employs an indirect heating principle. Domestic water supply and pool water to be heated are not run through the boiler; because when raw water from city mains is heated in the boiler coils, it drops part of its lime content, which is deposited on the walls of the boiler coils.

With this system, lime deposit in the boiler coils is avoided. The raw water from city main flows



ARKLA-Humphrey

UNIT HEATERS

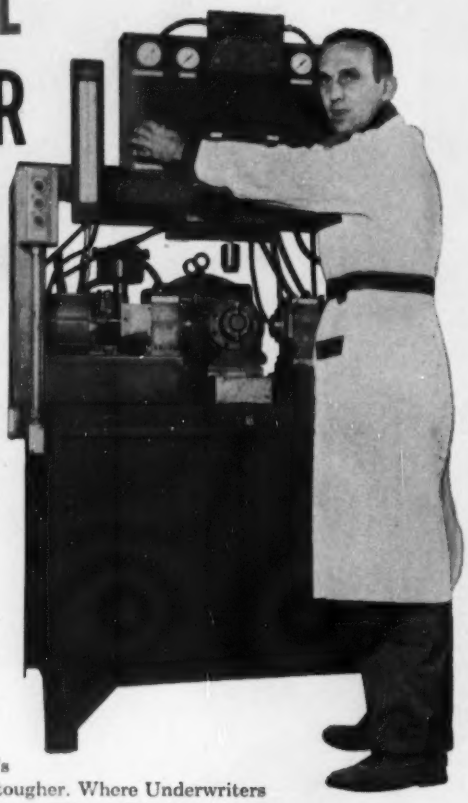
Arkla-Humphrey Multi-Directional unit heaters are accepting congratulations now. At long last, industry's toughest heating problems have been solved by the Multi-Directional!

Tests show a 15.38% fuel saving with only a 3° temperature differential from floor to 18' ceiling! Smoke photo above shows you why. The Multi-Directional is the first and only unit heater to discharge heat straight down, out in front, or from either side, or any combination of these three! Pulling the heat from the ceiling with top mounted fans eliminate overheated ceilings, too.

Write for complete information.

MANUFACTURED BY GENERAL OFFICES **ARKLA** AIR CONDITIONING CORPORATION SHANNON BUILDING LITTLE ROCK, ARKANSAS

NOT ALL BLACKMER PUMPS ARE PERFECT



Just the ones you buy!

Now and then we build a lemon . . . but you'll never see it! Reason . . . the Underwriters' Seal of Approval isn't good enough for us. They only ask for spot checks, but we test *every* Blackmer pump before it leaves the plant. What's more, we make the tests tougher. Where Underwriters specify water pressure tests at 375 psi, Blackmer runs them at 1250 psi. In the gas pressure test, Underwriters say 250 psi, but Blackmer tests your pump at 300 psi. Yes, we build some bad ones, but the man on the test rack gets the headache . . . not you. In LPG pumps, your safest bet is Blackmer. Write for Bulletin 500.

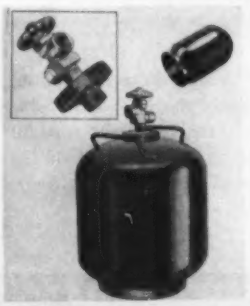
"liquid materials handling"® equipment

BLACKMER / *liquefied gas pumps*

BLACKMER PUMP COMPANY, GRAND RAPIDS 9, MICHIGAN

Find your Blackmer Man under "Pumps" in the Yellow Pages

Restore your cash & carry cylinders to regular service



Convert your cash & carry and self-service cylinders of limited application to profitable everyday service. Garretson adapters do this at a fraction of the cost of new cylinders.

This malleable iron adapter with neoprene gasket screws into the cylinder and insures a leak proof seal. A ¾" NPT female thread takes a standard bottle cap. Outside male thread takes standard bottle cap.

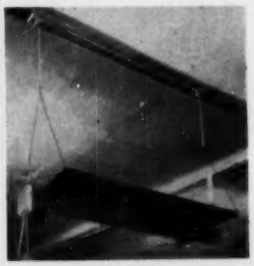
Order the 20-A1 adapter for "Self Service" type . . . 20-A2 for "Cash & Carry" with the welded protective collar. Both adapters priced at $1.95 each. Complete with 3103CO Rego valve, $4.42.

For volume use include in your order a Williams #428 spanner wrench. Only $2.50. Extractor wrenches for removing fitting from bottle also available at $7.95. Start making profits and order today. Distributorships in some territories are open. Write for details.

Garretson Equip. Co., Inc., Box 111, Mt. Pleasant, Iowa

New products

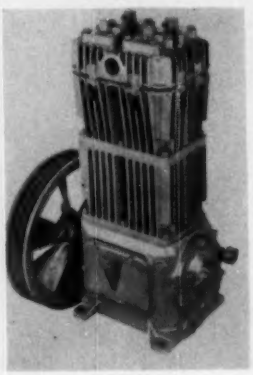
into a storage tank containing a copper-coil heat exchanger which is connected to the boiler. The water is then continually recirculated between the boiler and the copper-coil heat exchanger immersed in the storage tank, where it dissipates heat to the water in the tank. Raypak Co., Inc.



New pulley system makes pig blanket more flexible

Circle 18 on Readers' Service Card

A new pulley system has been designed to make the pig blanket more flexible and easier to handle. This system allows the blanket to be lowered automatically to a desired height. The pig blanket operates on LPG and assists the farmer with farrowing during the winter months (GEC 001). Johnson Gas Appliance Co.



New compressor for extra big jobs

Circle 19 on Readers' Service Card

A new compressor for the extra big jobs has over twice the capacity and transfers liquid and/or vapor in half the time required by previous models. The 490 series is designed with the compression cylinder separated from the crankcase, to prevent crankcase oil from contaminating the product (GEC 170). Corken's, Inc.

NEW EASY LEASE PLAN

. . . at only 70¢ per quarter per 100 lb. cylinder*

Leasing now extended up to 200, 300 and 420 lb. I.C.C. cylinder sizes

Terms of lease can include base stands and hoods

can make more profit for YOU!

* Rates slightly higher in Canada

Dealer [A] and Dealer [B] have 800 customers each,
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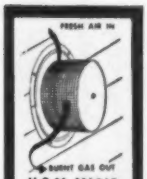
Vent-O-magic

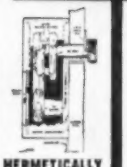
Sealed Heating



V-O-M MAGIC VENT BREATHES THRU WALL

- COMPLETELY AUTOMATIC
- NO CHIMNEY

Sells like magic, because it heats like magic. Slashes installation time—requires no ductwork. Completely sealed exchanger; burnt gases cannot enter room.



HERMETICALLY SEALED HEAT EXCHANGER

Here's *Heating Magic* for your customers to use on any outside wall up to 24 inches thick. Has automatic Thermostat, plus 100% Safety Shutoff in case of gas failure—Beautifully finished in lustrous baked enamel.

AVAILABLE IN 10,000 TO 35,000 BTU/HR INPUT RATINGS INCLUDING RECESSED AND TRAILER MODELS

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New products

No duct system needed in heating-cooling line

Circle 20 on Readers' Service Card

This air conditioning line (GEC 020), designed for use with one-story buildings, features gas-fired heating and air-cooling in a variety of capacity combinations. It circulates the air through a short concentric supply/return duct and ceiling diffuser, located directly beneath the unit, thus saving inside space. Janitrol.

LPG gauge for trailers appears on market

Circle 21 on Readers' Service Card

An LPG tank for trailer and mobile home use can now be fitted with an LPG gauge. The gauge is claimed to be the only product of its kind in the trailer field. The gauge replaces the 10 per cent "bleeder valve" included for safety on other LPG tanks (GEC 540). Marsh Butane Gauge.

New meter has capacity for small industrial loads

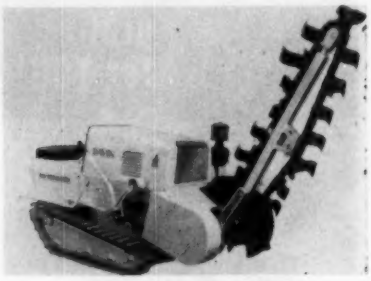
Circle 22 on Readers' Service Card

The AL-425 meter has been designed with ample capacity for small industrial or commercial loads. It includes D-slide valve construction and bellows-type, molded duramic diaphragms. The AL-425 has a rated capacity of 425 cfh at ½-in. wc differential with 0.64 sp gr gas (GEC 560). American Meter Co.

Swirl-proof sump gives positive drainage

Circle 23 on Readers' Service Card

"Safety-Liner" tank trucks (GEC 800) exceed ICC specifications. Features include: recessed valves, flexible hose, and a swirl-proof sump for sure drainage. North Texas Tank.



Trencher-backfiller unit obtains positive traction

Circle 24 on Readers' Service Card

Model C Davis T-66 trencher-backfiller unit obtains positive traction with maximum flotation by the use of broad, self-cleaning track shoes that create only 3.6 psi of ground pressure (GEC 210). Davis Mfg. Inc.

Component stock parts are now interchangeable

Circle 25 on Readers' Service Card

An industrial regulator with more than 96,000 different industrial applications is now possible because additional component stock parts are now interchangeable. The regulator has inlet pressures up to 3000 psig and outlet pressures up to 500 psig (GEC 700). Modern Engineering Co.

OPERATING AN L.P. GAS Business

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2. **Bulk Plant Design and Operation**
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Attractive welded steelcase meters provide ideal metered service for average LP-Gas loads. Quality construction assures years of accurate measurement at lowest maintenance cost.

- **internal, counter-type, tamper-proof index**
- **removable soldered top**
- **bellows-type, molded Duramic diaphragms**
- **one-piece Nylon valve guides**
- **impact-resistant plastic index box cover**
- **handy wall-mounting lugs**
- **synthetic grommet-type flag rod seals**
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Rated capacity 45 cfh propane and 40 cfh butane at ½-inch w.c. differential—5 psi working pressure—½-inch F.P.T. connections—shipping weight 8 lbs.—FOB Philadelphia.

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INCORPORATED (ESTABLISHED 1836)

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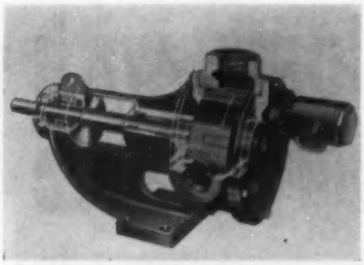

High-speed LPG truck pump has been developed

Circle 26 on Readers' Service Card

A new high-speed LPG truck pump, known as Model KK26OU (GEC 660) incorporates a needle bearing in the pump bracket. It can be operated up to 700 RPM and at a maximum differential pressure of 125 psi, delivering 81 GPM at 50 psi differential. Viking Pump Co.

FREE LITERATURE

Aluminum coatings brochure

Circle 27 on Readers' Service Card

A brochure on tinted aluminum coatings is now available. The coatings, in colors of blue, gray, gold and green, are intended as decorative finishes for elevated water tanks, gas holders, industrial structures and similar installations (GEC 610). Royston Laboratories, Inc.

Hot water converters data

Circle 28 on Readers' Service Card

A 20-page bulletin presents a new line of hot water converters designed specifically for space heating service. The bulletin also iists complete specifications covering 114 models in 2 and 4-pass arrangements (GEC 420). Niagara Weldments Inc.

1961 Valves Catalog

Circle 29 on Readers' Service Card

A new catalog covering the 1961 Milvaco line is now available. The line consists of various valves, fittings and nozzles for the marketing divisions of the petroleum industry, including transportation, service stations, bulk plants and aviation (GEC 820). Milwaukee Valve Co., Inc.

Worldwide operations depicted

Circle 30 on Readers' Service Card

Export facilities and worldwide operations to meet the growing needs of industry for metal cleaning and finishing equipment, and dust and fume control equipment, are depicted in a new 16-page brochure (GEC 450). Wheelabrator Corp.

Two bulletins on regulators

Circle 31 on Readers' Service Card

Specifications for Reliance type H pressure regulators and series Z pilot regulators are described in two new bulletins, 103 and 140 (GEC 700). Bulletin 103 tells the specifications for type H regulators for domestic, commercial, and industrial applications. They are also used for low pressure pilot applications. American Meter Co.

Charts compare oxy-LPG

Circle 32 on Readers' Service Card

The wall charts (GEC 870) comparing the traits of oxy-LPG flame to oxy-acetylene flame can now be obtained. Each chart, suitable for training and education, has nine reproductions in full color, and is 11 by 17 in. Smith Welding Equipment Corp.

Management library catalog

Circle 33 on Readers' Service Card

This 1961 catalog, describing 120 items, offers a wide range of management, sales, training, and service information (GEC 450). Fifty per cent of the items are new additions. Cities Service.

How to sell gas ranges

Circle 34 on Readers' Service Card

Demonstrating and closing sales of gas ranges is detailed in a pocket-size 20-page booklet (GEC 240). The booklet provides the salesman with five simple illustrated steps to follow. Harper-Wyman Co.

Installing transmissions

Circle 35 on Readers' Service Card

Literature on how to mount auxiliary transmissions to pickup trucks with "X" frame construction is available (GEC 790). The installation of the transmission in the underdrive position provides a simple means of mounting and driving a power takeoff. H. S. Watson Co.

UNLIMITED CAPITAL AVAILABLE for FINANCING LP GAS EQUIPMENT

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BPN PEOPLE

RALPH BOTWICH has been named general manager of the National Propane Corp.'s Lehigh Bottled Gas Division, Norwich, Conn. He had served as sales promotion manager at company headquarters in New York. JOHN A. HANRAHAN has been appointed manager of employee and labor relations for NPC. He had served the company's Conservative Gas Division as manager. VINCENT PARZIALE — from assistant treasurer of NPC to controller.

Ralph Botwich

John Hanrahan

National Propane Corp.

A. JOHN ST. GEORGE—from Ensign product manager of American Bosch Arma Corp. to manager of planning and administration. ROBERT P. ENSIGN—from works manager assistant to Ensign product manager.

A. J. St. George

R. P. Ensign

American Bosch Arma

SETH S. KIDMAN — from assistant plant superintendent of the Baton Rouge plant of Cal-Metal Pipe Corp. of Louisiana, to superintendent. LEONARD E. BODENHAMER has been appointed to the Tulsa Mid-Continent district sales office. HOWARD E. MIDKIFF —from Tulsa district sales manager to sales manager.

JOHN GETGOOD has been appointed president of Pacific Petroleums Ltd., Alberta, Canada. Getgood has been vice president of Phillips Petroleum International Corp. in New York.

A. CAVE RICHARDSON has been appointed vice president and general manager of Chattanooga Royal Co., Tenn. He had served in an administrative capacity. GEORGE M. CHILDRESS has been appointed vice president, manufacturing and engineering. He had been in various manufacturing capacities with the company.

JAMES M. PARKER—from assistant manager of sales training of the Norge division of Borg-Warner Corp., to administrative assistant to the national sales manager. JOHN J. HAYES, formerly with the Cribben & Sexton Co. of Chicago, has joined the company as gas range sales manager.

DEALERS URGED TO TAKE CLOSE LOOK AT COMMUNITY, CIVIC AND INDUSTRY ACTIVITIES

. . . O. M. Bailey, Vice-President
Union Texas Natural Gas Corp.

Every American businessman today has far more demands on his time and energies than he can afford to recognize, and LP-gas dealer-distributors, with the added seasonal and service pressures peculiar to our industry, are subject to even greater claims. Sooner or later, for one cause or another, each is faced with the decision as to how much time, effort and energy he should spend in community affairs, civic work, or in behalf of state and national LP-gas associations.

His obligations are plain. As a citizen, he is obliged to work towards the betterment of the community in which he lives. As a businessman, he has a vital interest in the progress of his industry. Even though he has the desire to serve, however, he must make a practical and realistic appraisal of each such request.

Perhaps the following checklist will aid in making such a decision the next time the occasion arises . . .

1. How long will this responsibility last?
2. How much time will it require?
3. How much help will you have from others?
4. Will frequent committee meetings be required?
5. Will you be involved in the actual "leg-work"?
6. Are you actually suited to the task involved?
7. Are you experienced in this type of work?
8. Is there yet adequate time to prepare for the event?
9. Who will take over, in your business, in your absence?
10. Can you complete the project successfully, to your credit?

Positive or negative answers to the foregoing questions do not necessarily decide the issue, because external pressures may be so great in certain instances that a "no" is out of the question. On the other hand, a "yes", without close consideration of these factors is an equally unfair decision to make. "Forewarned is fore-armed" in situations such as these, and "checking yourself out" can help assure you of success in the undertaking at hand — and good relations for you as an individual and businessman in your community.

We are proud of the outstanding record of many of our dealers in community and industry work . . . but we are equally proud of the manner in which their businesses are conducted in the meantime. It matches our own zeal for dependability of the highest calibre in our own obligations.

UTN

Texas

UNION TEXAS NATURAL GAS CORPORATION

ENTERPRISE BUILDING TULSA, OKLAHOMA

People

CHARLES M. HOOVER, former sales manager of the Marquette Corp. of Minneapolis, has joined Geo. D. Roper Sales Corp. of Kankakee, Ill., as director of marketing.

DONALD E. BARTON — from retail merchandising advisor of Maytag Co., Newton, Iowa, to manager of market development.

J. HOWARD MARSHALL, former vice president of the Signal Oil and Gas Co., has joined Union Texas Natural Gas Corp., Tulsa, Oklahoma, as president.

RALPH R. MENDELSON has been appointed president of Hotstream Heater Co., Cleveland, Ohio, to succeed L. R. Mendelson who is retiring.

JOYCE LEE TAYLOR a recent graduate of the University of Missouri, has joined the Uregas Companies as home service director.

M. G. PURPUS—from sales manager of Black, Sivalls & Bryson, Inc., Kansas City, Mo., to works manager.

JACK ROSWAL—from regional sales representative of Welbilt Corp., Maspeth, New York, to national sales manager. S. H. LANG—from assistant sales manager to manager of special contract sales.

A. J. "ART" HORN has been appointed to head the newly-created, merged engineering service department of the Payne Co. and Day & Night Mfg. Co. of La Puente, Calif.

THOMAS E. PERKINS has been promoted vice president of the Bottled Gas Corp. of Virginia. He had been engineering and industrial division manager.

A. J. Horn

Payne-Day & Night

Thomas Perkins

Bottled Gas Corp.

ROSS WYATT . . . from manager of Dealers Supply Co., division of Tennessee Liquefied Gas Corp., Memphis, to comptroller and accountant of TLGC. J. WENDELL DAVIS . . . from co-manager of TLGC of Dyersburg, Tenn., to manager of Dealers Supply Co.

Ross Wyatt

Tenn. Liquefied

J. W. Davis

Dealers Supply

E. N. WRENSHALL has been elected vice president of Kerotest Mfg. Co. of Pittsburgh. He was formerly general manager.

ROSEMARY ARCHIBALD has joined the Harper-Wyman Co. of Chicago as home service director. She was formerly with Milwaukee Gas Light Co.

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Get details of Dearborn's clean-cut selling policy from any of these regional sales offices: Atlanta, Chicago, Dallas, Los Angeles, San Francisco.

CALENDAR

All associations are invited to send in the dates of their forthcoming meetings

March 5-7—Indiana LPGA Trade Show and Convention—Claypool Hotel, Indianapolis, Ind.

March 7-9—LPGA Technical & Standards Committee Meetings—Royal Orleans Hotel, New Orleans, La.

March 15-17—NGAA 40th Annual Convention—The Baker and Adolphus Hotels, Dallas, Texas.

March 20-22—AGA General Management Conference—Francis Marion Hotel, Chas., S. C.

March 20-22—LPGA Southeastern District Convention and Trade Exhibit—Biltmore Hotel, Atlanta, Ga.

March 26-28—Iowa LPGA Convention—Kirkwood Hotel, Des Moines, Iowa.

April 5—Wisconsin LPGA Convention—Whiting Hotel, Stevens Point, Wis.

April 11-12—New York State LPGA Convention—Manhattan Hotel, New York City.

April 11-13—Midwest LPG Service School—Iowa State University, Ames, Iowa.

April 13-15—Gas Appliance Manufacturers Association Annual Meeting—Boca Raton Hotel, Boca Raton, Fla.

April 13-15—Western Liquid Gas Association Convention and Trade Show—Hotel El Dorado, Sacramento, Cal.

April 16-17—Kansas LPGA Convention—Allis Hotel, Wichita, Kan.

April 16-18—American Home Laundry Appliance Manufacturer's Association Convention—Boca Raton Hotel and Club, Boca Raton, Fla.

April 16-18—Ohio LPGA Annual Convention and Trade Show—Sheraton Gibson Hotel, Cincinnati, Ohio.

April 17-18—South Dakota LPGA Convention and Trade Show—Sheraton-Cataract Hotel, Sioux Falls, So. Dak.

April 23-25—Mississippi L. P. Gas Dealers Association Annual Convention—Edgewater Gulf Hotel, Edgewater Park, Miss.

April 28—NGAA Oklahoma Regional Meeting—Lake Murray Lodge, Ardmore, Okla.

April 30-May 3—National LPGA Convention and Trade Show—Conrad Hilton Hotel, Chicago, Ill.

May 12—NGAA Permian Basin Regional Meeting—Lincoln Hotel, Odessa, Texas.

May 15-19—NFPA Annual Meeting—Statler Hotel, Detroit, Mich.

May 22-24—Kansas LPGA Gas Carburetion School—Manhattan, Kan.

May 25—Maryland LPGA Convention—Sheraton-Baltimore Inn, Baltimore, Md.

June 4-5—Butane-Propane Institute of Louisiana Annual Convention—Capitol House Hotel, Baton Rouge, La.

June 4-6—Missouri-Illinois L. P. Gas Exposition—Sheraton Jefferson Hotel, St. Louis, Mo.

June 6-8—Northeast LPG Carburetion Clinic, Harrisburg, Pa.

June 4-9—Florida LPGA Service Conference—University of Florida, Gainsville, Fla.

June 21-22—L. P. Gas Training School—Purdue University, Lafayette, Indiana.

August 24-26—Florida LPGA Annual Convention—Hotel Robert Meyer, Jacksonville, Fla.

Sept. 15-17—Iowa LPGA Convention—The New Inn—Lake Okoboji, Iowa.

Dec. 5—Wisconsin LPGA Convention—East Side Businessmen's Association Club House—Madison, Wis.

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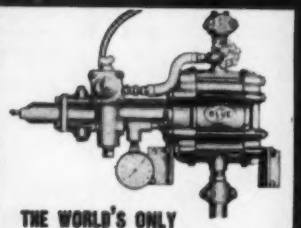

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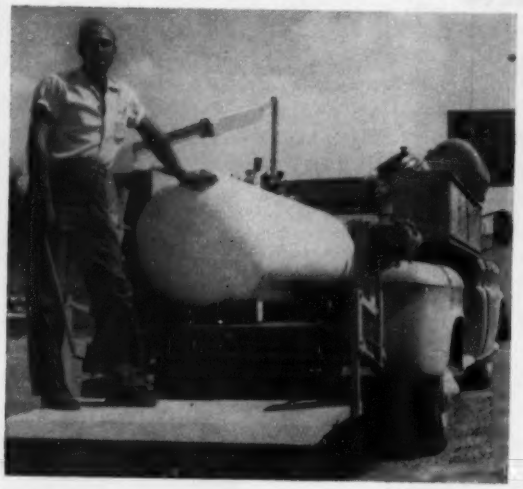
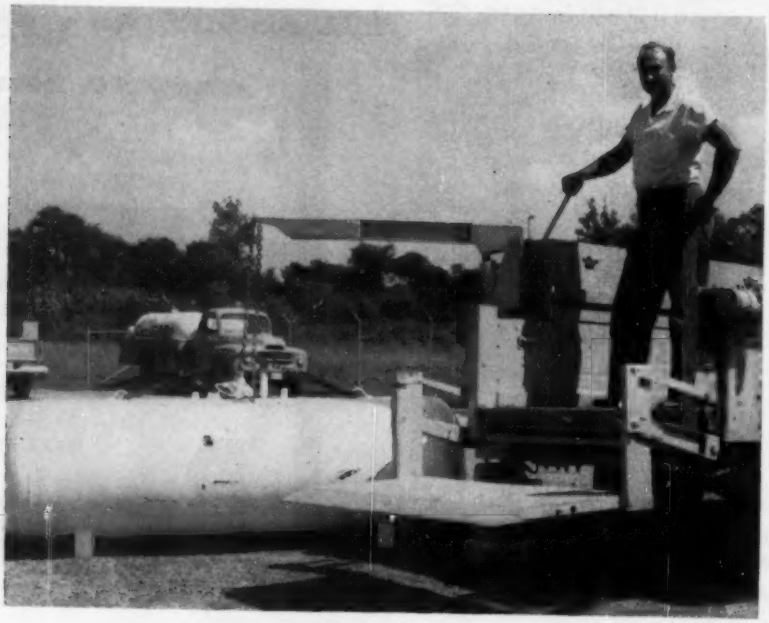
Setting tanks is as easy as 1-2-3



Unloading a 250 gal bulk tank is as easy as 1-2-3 with Cecil-gas' new truck-mounted crane. At top, foreman "Speedy" Stafford has crane in place, ready to swing tank over side. From there, it's a quick trip (center) to the ground (below). For these photos, concrete blocks were used in place of dog legs, which had not yet arrived.



One man, with truck crane does the work of three

MILTON LEVINSON • Vice President • Cecil County Gas Co.

AT CECIL COUNTY GAS CO. (Elkton, Md.), we've never had much success using trailers to set customer bulk tanks. We've found they are difficult to back onto customers' premises, and it seemed whenever we wanted to use one it had a flat tire.

Now we've found what we believe is a better way to do the job. It only cost us $250, but it saves us the time of two men in setting tanks.

We ordered an Ideal crane and had it mounted on a one-ton Chevrolet pickup. By so doing, we killed two birds with one stone, as we needed a pickup anyway. The crane is well suited to handling the tanks, which range in size from 420 lb to 500 gal. in size.

The truck bed was beefed up with I-beam tied into the rear frame to make a sturdy support for the crane. A dog-leg was installed directly below the crane to give additional rigidity to the truck chassis. Installation of the 2500-lb capacity crane was fairly simple, since it was mounted right on the I-beams. Total weight added by the crane was only 120 lb.

Another important labor-saving device added to the truck at the same time was a Daybrook lift gate. It adds 300 lb to the truck, but makes it easy to handle 600 lb appliances.

The new truck was put into operation in mid-summer and soon exceeded expectations. One man could now pick up a loaded 420-lb tank, weighing almost 800 lb, and spot it with precision at the customer's location. Or he could pick up the same tank and put it on the truck. Both of these had been three-man jobs. With the crane, two men can now handle a 250- or 500-gal. tank with comparable speed. The 500-gal. tank, which weighs 1400 lb, is the heaviest object the crane will be called on to handle. When the crane is not being used, the operator swings it forward and inserts it into a bracket on top of the tool box.

The crane has enabled us to speed up our entire operation a great deal and the men like it because of the ease and simplicity of handling. The complete crane unit, incidentally, cost $150 and the labor and materials needed to mount it added another $100. This $250 investment has proved to be such a good solution to our bulk tank handling problem that we plan to make it standard equipment on all of our service trucks. ■

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PROPANE INSTALLATIONS MAN wishes employment in Western States. Can repair refrigerators, stoves, ovens, heaters, and all appliances. Also on boats and trailers. Mr. Dallas J. Graves, 340 Longwood Pl., Seattle 15, Wash.

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Do you feel your progress is too slow or completely blocked in your present LP job? Large, privately-owned LP-Gas Marketing Company is seeking men to train for key positions. If you are interested and believe you can qualify, please send resume of your personal history and work experience. All replies confidential. Reply

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to evaluate retail operations for financing, purchasing, or selling. Must be thoroughly familiar with retail management, equipment, operations, and financial controls. This is a highly responsible position with a nationwide marketer and is open to an aggressive, reliable individual, well qualified and willing to travel. Salary commensurate. Send late photograph and complete biographical history of education and experience. Write to

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WANTED TO BUY: USED 100 to 1000 gallon propane bulk tanks in or near Central Indiana area. State number of tanks, age and price. Write—Westfield Gas Company, Westfield, Indiana.

WANTED—USED 100# ICC Cylinders in good repair. Write stating price, age, weight, number available. T J C Propane, Inc., 307 N. Fourth Avenue, Evansville 10, Indiana.

FOR SALE—MISCELLANEOUS

DECALS MADE FOR TRUCKS, EQUIPMENT. Small or large quantities. Catalog free. Mathews Co., 827 S. Harvey, Oak Park, Ill.

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BAKER ALCOHOL PUMPS, the answer to your Moisture Problem. Injects alcohol into propane cylinders. Saves changing regulators moving tanks. Pays for itself in a jiffy. Send $59.95 for pump complete with fittings. Baker Engineering, Malone, New York.

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Watching Ralph Fisk of Fisk Gas Co. lighting the gaslights in the new Gaslight Tap Room of the Hotel Augustan, are Chef Louis Bascomb, Manager Cole Barnard, and Clinton Barnard.

Owner sees the light—with GAS!

INTERNATIONAL BUSINESS MACHINES HAS A SLOGAN with which most of us are familiar, but most of us do not practice enough. "THINK." Ralph Fisk, owner of Fisk Gas Service in Cobleskill, N. Y., practices what they preach. All the time. Even when he goes out to dinner, for instance, he is thinking of ways and means to improve his industry and his business. It pays off, too.

Take the time, not too long ago, when Fisk was visiting Hotel Augustan in Cobleskill and engaging in some pleasant chatter with the manager, Cole Barnard. The latter was talking about the remodeling job he was having done on the hotel's tap room. Barnard had decided to have the room done in dark wood paneling, suggesting a quiet, cozy-type atmosphere. Adding an old-time touch, he also planned to have a row of bourbon barrel ends lined up behind the bar.

Now many folks would have merely been content to sit there and listen to the hotelman's description of his plans. Not Fisk. He was thinking. What an ideal set-up for a gas-light type of room! At the same time, Barnard opened the door for Fisk. "What we need is something to complete the decor," he said.

What that "something" was was only too obvious—gas lights. Barnard took to the idea almost immediately. He asked Fisk to look into the possibilities of installing the lights in the tap room. There were problems; such as running the gas lines through and around the building which was built in 1875 with its two-ft thick walls. Also, Barnard wanted the outdoor-type gas lights installed indoors. Fisk checked this point with several manufacturers and received assurance that this was okay.

These problems out of the way, Barnard ordered four gas lights. Two were put in the tap room, one in the hotel's lobby and the other outside at the entrance from the parking lot. The lights even gave the room its name: "Gaslight Tap Room." As if that was not enough publicity for the propane-fueled lights, Barnard even went further, concocting a specialty of the house —a Gaslight Cocktail.

There was only one fly in the ointment. Barnard's father (the hotel has been a family operation for 35 years) still was not "sold" on the gaslights even after their installation. However, Ralph and

Gaslights

Cole got some help from an unexpected source. Mother Nature came to the rescue. About two weeks after the gaslights had been installed, a severe thunderstorm hit the area. All electrical power was lost for four or five hours.

"But," reported Fisk, "lo and behold, the lobby of the Hotel Augustan, the parking lot entrance, and the tap room were all sufficiently lighted to carry on with the usual business. Cole's father got quite a kick out of the fact that they had lights when the regular power was off for so long a time." Thus was the elder Barnard "sold." ■

Failure to use water increases fire damage

AN L. P. GAS-FUELED TANK TRUCK equipped with two 900-gal LPG cargo tanks had been towed into the garage for repairs to its clutch. During maneuvering of the gas cargo truck, the tow truck struck and knocked off the ¼-in rotary gauge on the 35-gal LPG motor fuel tank for the disabled vehicle. Employees knocked over a 5-gal can of gasoline when running from the building. Flammable vapors probably were ignited by the tow truck engine which had been left running. In addition to the cargo truck, grease and oil accumulations on the concrete floor, spilled gasoline and the wood deck roof were involved.

Fire fighters did not direct hose streams on the 900-gal tanks because of fear of an explosion. Heat caused the safety relief valves to operate periodically, feeding escaping gas to the fire. As outlined in an August, 1959, article in NFPA *Firemen* magazine, "How to Handle L. P. Gas Vehicle Incidents," it is important that sufficient water be applied to keep the shell of the vessel and piping cool to avoid any unnecessary release of LPG. *NFPA Fire News, January 1961.*

ADVERTISERS

***These advertisers carry additional information on their products in the 1960 Butane-Propane Catalog.**

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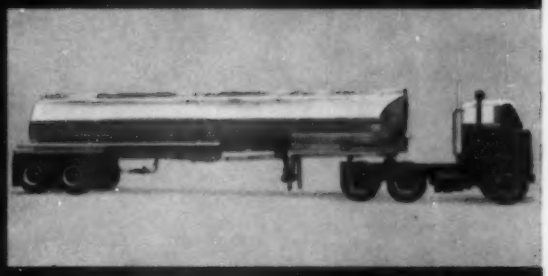

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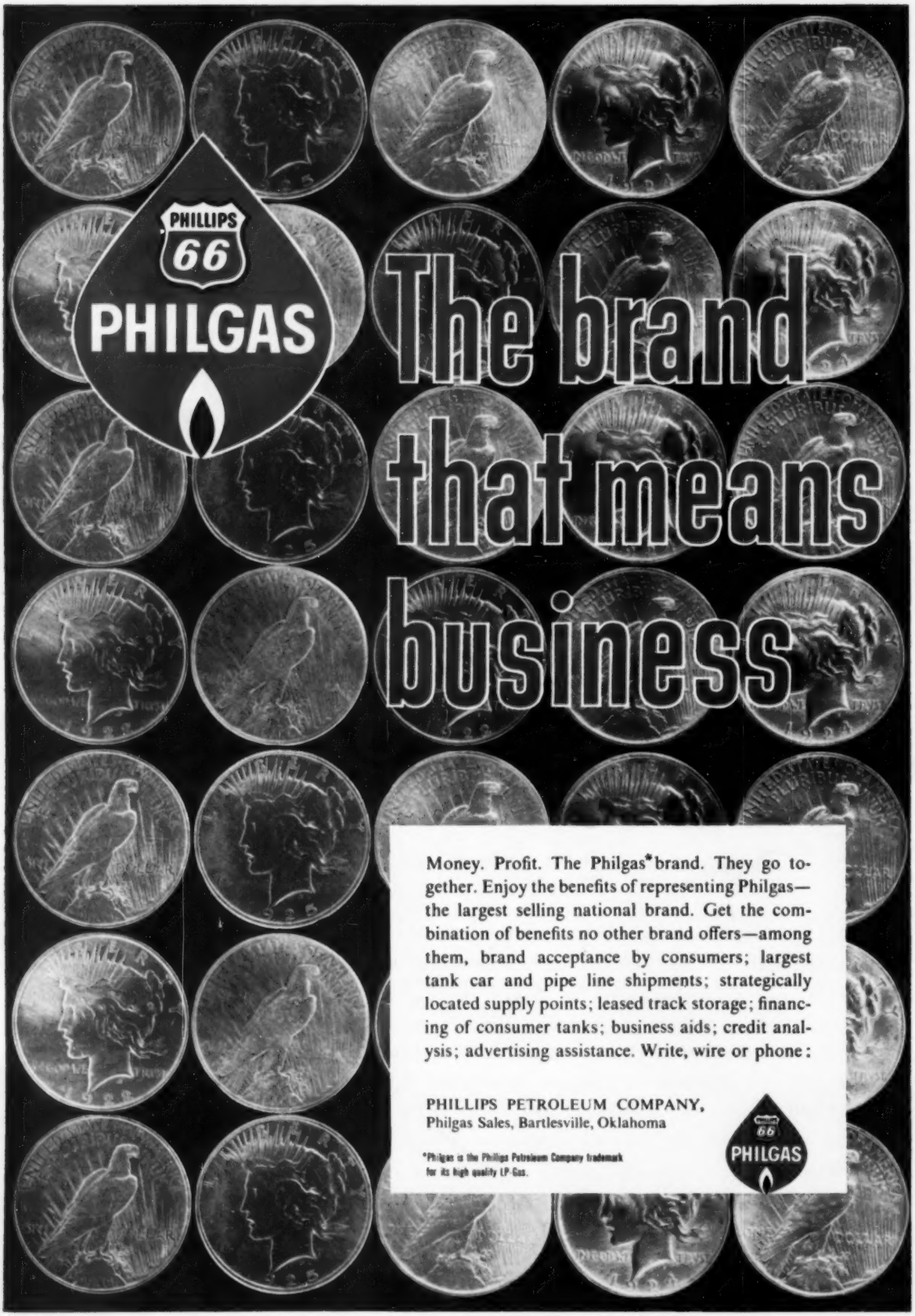
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